AN INVESTIGATION OF INTERNET ADOPTION FACTORS IN NEW ZEALAND'S SMALL- AND MEDIUM-SIZED ENTERPRISES – FROM AN INDUSTRIAL PERSPECTIVE

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ABSTRACT

This thesis aimed to investigate the impact of firm- and industry-specific factors on the decision to adopt Internet technologies among SMEs in New Zealand's retail and tourism industries. A mail survey was sent to 500 retail SMEs and 1,000 tourism SMEs, with response rates of 26.4 percent and 33.4 percent respectively. The results indicated that, in a comparison of perceived benefits, organizational readiness and external pressure, the most important factor in determining the adoption decision was the perceived benefits. Overall, the level of Internet support, business size, international business, and years on the Internet were the most important structural factors in determining Internet technology adoption. When comparing retail and tourism SMEs, the level of Internet support within a firm, business size, and years on the Internet were more important factors for the tourism SMEs than for their retail counterparts. On the other hand, business type and international business were more important factors for retail SMEs than they were for tourism firms. The research also found that tourism SMEs experienced greater pressure from the external environment to adopt Internet technologies than did retail firms.

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Chapter 1

Introduction

1.1 Background to the Research

As the twenty-first century unfolds, the Internet and electronic commerce have become increasingly important to the business world, government, and even our daily lives. The growth has been impressive due to the nature of the Internet as an open, non-proprietary protocol, using a standard coding system and a standard interface to present data and to access the World Wide Web (WWW). Its interconnectivity with existing Information Communication Technology (ICT), such as telephone, computer, and cable TV systems, has also helped to propel its growth exponentially (Organisation for Economic Co-operation and Development, 1999). While this information infrastructure is maturing and has become more reliable to users, the Internet has also been commercialised as a new business tool regardless of the size of the business (Esch, 2002). Cooper and Burgess (2000) noted that the Internet has not only provided but also created new business opportunities in both the business-to-consumer and business-to-business contexts. Among the many other advantages of Internet adoption by businesses, several studies argued that the Internet has provided equal opportunities for both large and small- to medium-sized

enterprises (SMEs). In particular, SMEs can now overcome some of the major disadvantages, such as size, limited financial, technological and human resources, and limited exposure to the global market, by adopting Internet technologies (Cooper & Burgess, 2000; Riquelme, 2002).

However, empirical evidence has shown that not all SMEs recognised or perceived these benefits as being equally important (Levy & Powell, 2003; Walczuch, Van Braven, & Lundgren, 2000). According to Clark (2001), the reason for this might be answered by the fact that there are industrial differences that exist in the behaviour of Internet adoption, due to the different nature of the product or service offered. Furthermore, research into the impacts of firm- and industry-specific factors on Internet adoption among SMEs is still lacking, particularly in the New Zealand context. Thus, the aim of this paper is to provide a better understanding of Internet adoption behaviour among New Zealand SMEs from an industry perspective.

1.2 Research Context and Importance

1.2.1 SMEs in New Zealand

The rapid growth of SMEs has been observed worldwide and their impact on both national and global economies has been dramatic. Within the member countries of the Organisation for Economic Co-operation and Development [OECD], SMEs generally

constitute over 90 percent of all enterprises, and account for 60 to 70 percent of the entire workforce. In New Zealand, SMEs overall are recognised as a vibrant, dynamic, and innovative group of businesses, constituting approximately 96 percent of enterprises, 35 percent of the national economic output, and over 40 percent of employment (Al-Qirim, 2004; Corner, 2001; McCole & Ramsey, 2004). According to the Ministry of Economic Development, the annual growth rate of SMEs in New Zealand was averaging at 4.7 percent, which was higher than the overall rate of 3.6 percent. In the March 2004 quarter, it was evident that the growth rate of the economy was lagging behind that of the SMEs' (Ministry of Economic Development, 2004).

1.2.2 The Tourism and Retail Industries in New Zealand

The tourism industry is a significant part of New Zealand's economy. Its contribution to the national economy is enormous, generating approximately $7.4 billion per year in foreign exchange, and providing $16.5 billion per year in Gross Domestic Product (GDP). As one of the largest export industries, it is also one of the major employers, providing approximately 10 percent of the employment. Similarly, the retail industry also plays a key role in the national economy. It generates a substantial level of annual sales of around $50 billion, and supports approximately 20 percent of the nation's employment. Both industries comprise businesses ranging from large to small- and medium-sized enterprises (New Zealand Tourism Conference [NZTC], 2005).

1.2.3 The Impact of Internet technologies on SMEs

As mentioned above, the emergence of the Internet and the World Wide Web (WWW) has created both business opportunities and challenges for large and small firms. The impact of Internet technology on business activities has been seen in both private and public sector enterprises in New Zealand. The New Zealand government expected that Internet-enabled business activities would minimise the constraints caused by time and distance, and benefit the business supply chain (Rashid & Al-Qirim, 2001). According to Hossain (2000), New Zealand offered many strategic advantages for Internet commerce, such as "English speaking, geographical location, acceptance of communications technology, deregulated telecommunications industry, an exporter of technology expertise" (p. 120). However, the uptake of Internet- or electronic-commerce in New Zealand is relatively slow compared to the U.S. and Europe (Hossain, 2000; Locke & Cave, 2002; Yao, 2004). Empirical studies suggested that the Internet and the World Wide Web (WWW) were often utilised merely as a communication tool for distributing information about the company and its products and/or services, rather than offering more sophisticated functions, such as online payment options (Clark, 2002; McCole & Ramsey, 2004).

Giving the ongoing importance of Internet-commerce, this research goes some way towards filling the gaps identified earlier. The aim of this research was to

improve the understanding of firm- and industry-specific factors affecting the decision to adopt the Internet by New Zealand's SMEs. In terms of Internet adoption factors, the goals were set to identify the similarities and differences that may exist in the retail and tourism sectors. This research will help to isolate any critical issues concerning Internet adoption and SMEs, and the findings may be useful to management in delivering better Internet strategies for their businesses.

1.3 Thesis Structure

The thesis has five major sections: introduction, literature review, methodology, results of data analysis, and discussion and conclusions. Chapter two reviews and discusses previous studies of Internet adoption by SMEs, and then presents the conceptual framework and model for this research. Chapter three reviews the methodological procedure used to conduct this research, introduces the research constructs, and discusses research quality issues. This is followed by the presentation of the results of data analysis in chapter four. The last section concludes the research findings and discusses the limitations of this paper, and points out some directions for future research.

Chapter 2

Literature Review

This chapter reviews past Internet and technology adoption research. It first introduces the importance of Internet adoption and SMEs, and it then reviews the Internet technology and IS literature. The final section presents the research framework and the hypotheses tested in the empirical study.

2.1 The Internet

The growth of the Internet and the World Wide Web (www) has been dramatic worldwide for over a decade. The Internet has now become one of the most widely utilised communication tools throughout the world by millions of organisations. Researchers such as Kula and Tatoglu (2003), found two main factors which could explain the phenomenon of high approval and use of the Internet by businesses. Firstly, there is the low set-up and operational costs of the Internet. Secondly, there is the improved informational and interactive capabilities of the Internet, which could be used as a communication tool as well as a marketing channel. These capabilities of the Internet have also enhanced the effectiveness of the inter-organisational relationship

between business partners, and created new network cooperative opportunities. For example, the Internet can be used to provide direct contact with customers, suppliers and distributors, and it can also facilitate business processes and transactions, as well as information sharing. Moreover, it can be used as a marketing channel for companies to promote their products and/or services, and build a business image around the world without having physical premises there. In addition, the Internet can be used as an internal communication tool, such as Intranet, within the firm to facilitate internal process, information transfer, and manage workflow (Beach, 2004; Kula & Tatoglu, 2003). In sum, the Internet has changed the way firms conduct businesses in this competitive global environment.

2.2 Small- and Medium-Sized Enterprises

The importance of SMEs and their economic contributions are not difficult to observe, either in New Zealand or overseas. SMEs in the U.K. employ more than 70 percent of the entire workforce. In Ireland, SMEs (companies with fewer than 250 employees) form 99.4 percent of all the enterprises. The European Commission has also recognised that the majority of jobs were created by SMEs. In New Zealand, most of the businesses are small as well. The Ministry of Economic Development [MED] (2002) reported that approximately 45 percent of the entire workforce were found in

small businesses with less than 20 employees. SMEs in New Zealand constitute 97.3 percent of all private sector enterprises, accounting for almost one half of private sector employment. More specifically, 86.9 percent of firms employed 5 or less full-time equivalent employees (FTE), while 97.3 percent employed 19 or less FTEs (Al-Qirim, 2004; MED, 2002).

The role of SMEs in today's supply chain is increasingly important due to a number of factors. Firstly, as consumers today expect a greater variety of, and more personalised, products and services, smaller producers are often more flexible in fulfilling these demands and providing niche products to the market. Secondly, larger firms tend to concentrate their production on their core competencies and are increasingly out-sourcing other skills through smaller companies. Thirdly, due to the rapid growth of Information Technology, both the costs of co-ordinating activities within a large firm and the costs of co-operation have decreased. As a result, buying from outside firms is increasingly frequent. Furthermore, while larger companies have come together to create electronic marketplaces, the new business opportunities that have arisen also benefit the smaller players (Caskey, Hunt & Browne, 2001; Riquelme, 2002). The impact that Internet and Information Technology has on smaller players is illustrated by Riquelme (2002): "The Internet is said to level the ground for small and medium enterprises (SMEs) competing with large corporations and enables the

smaller, growing companies to make a strong impact on their customers" (p. 276).

Nevertheless, due to the different limits set by countries and agencies, there is no agreement regarding what constitutes a good definition for small to medium-sized enterprises (SMEs). In New Zealand, the MED originally defined SMEs as enterprises employing 19 or fewer full-time equivalent employees (FTE). More recently, for comparison purposes, the definition of SMEs has been extended to include up to 100 FTEs. SMEs have also been categorised into manufacturing and non-manufacturing sectors where manufacturing SMEs employ less than 100 people and non-manufacturing SMEs employ less than 20 people (Al-Qirim, 2004). As the work of Mehrtens, Cragg and Mills (2001) serves as the basis for this study, SMEs in the context of this paper were defined according to the definition given by them, that is, SMEs are firms employing 200 or less full time equivalent workers and are not subsidiaries, but independent, non-franchised organisations.

2.3 Research Framework and Hypotheses

2.3.1 The Development of the Research Framework

As SMEs are often managed and operated by their owner(s) (Al-Qirim, 2004), they are generally characterised as having a small management team, strong owner influence, centralised power and control, lack of IT expertise, lack of control over external environment, limited market share, and reluctance to take risks (Beck, Wigand & Konig, 2004; Seyal, Awais, Shamail & Abbas, 2004). In terms of the attitude towards technological innovations, most SMEs were more likely to avoid sophisticated software and applications due to lack of necessary specialists, and limited human, financial and technological resources within the firm (Begin & Boisvert, 2002; Seyal et al., 2004). Thus, the development and implementation of new technologies often presented a challenge to SMEs. Moreover, Thong and Yap (1995) argued that the uptake of new innovations was also strongly influenced by the CEO's attitude towards innovation. They found that the more positive attitude a CEO had towards innovation, the more innovative their mind was, and the more knowledgeable they were about the development and application of Information technology, which then means the more likely they would be to adopt it. (Seyal et al., 2004). Ihlstrom and Nilsson (2003) stated that:

> "It is important to appreciate the nature and context of small enterprises and not treat them as smaller versions of large corporations. SMEs have special prerequisites concerning human and technology resources. They will probably not invest in new technology if they cannot see its immediate use" (p. 213).

The growth of the electronic marketplace on the Internet has offered SMEs more opportunities to compete on an equal basis with larger corporations, yet there was still inadequate evidence about SMEs benefiting from the World Wide Web, and in fact very few were actually doing so (Ihlstrom & Nilsson, 2003; Riquelme, 2002). The reasons for not adopting the Internet vary from business to business, however, it would be a good start to study and review how to improve the Internet adoption rate in SMEs. Clearly, recognising the factors of adoption would further help the practitioners to better implement Internet adoption in SMEs.

Based on the literature review, a framework that could account for internal and external factors is needed for studying IT, Internet, or E-commerce adoption at the organisational level. Mehrtens et al.'s (2001) Internet adoption model has been chosen as a starting point for several reasons. Firstly, their model included perceived benefits which related to attributes and perceptions of the technology, organisational readiness which related to internal influential factors, and external pressure which related to external influential factors. Therefore it fulfilled the prerequisites of building a

framework that accounts for internal and external influential forces to estimate Internet adoption behaviours.

Secondly, many similarities were found between Internet adoption factors and IT and E-Commerce adoption, for example, the major factors had similar titles. Thus, an Internet study based on previous validated IT research, such as Mehrtens et al.'s (2001) Internet adoption model, should be able to capture the essence of Internet technology and enhance the reliability and validity of the research.

Thirdly, Mehrtens et al.'s (2001) model was based on the EDI adoption model developed by Iacovou, Benbasat & Dexter (1995). Iacovou et al.'s model has been used as a base model to develop adoption models for other IT adoption studies. Moreover, Mehrtens et al. (2001) found that the EDI adoption model was helpful in examining the adoption of the Internet by SMEs due to the fact that EDI is one of the building blocks in terms of technological infrastructure. It is only reasonable to usefully apply previous EDI research findings to Internet research. Therefore, it seems logical to begin the study of Internet adoption factors by examining Mehrtens et al.'s (2001) work, as they have provided such a comprehensive Internet adoption model.

Based on the structure of Mehrtens et al.'s (2001) model, a proposed research model was developed. There were three main categories of factors that were influential to the adoption of the Internet. The following summarises the research

variables used in this study. The variables included in the research model do not claim to be comprehensive. Rather, they were selected based on the consensus in the innovation literature and empirical evidences as representing key theoretical factors affecting organisational innovation adoption. The main variables reflected three elements, they were:

1. Perceived benefits,
2. Organisational readiness, and
3. External pressure

2.3.2 Factors of Internet Adoption by SMEs

While some empirical research has been conducted on Internet adoption factors in SMEs, there seems to be a consensus that our understanding is still very limited where firm- and industry-specific factors are concerned, particularly in the New Zealand context. The following section reviewed the major firm- and industry-specific factors related to Internet adoption presented in the literature.

2.3.2.1 Perceived Benefits

Perceived benefits of the Internet by SMEs include both direct and indirect benefits. For instance, cost reduction on operations and improved internal efficiencies

represented some of the direct benefits, and improved customer service and business processes were some of the indirect benefits (Chwelos, Benbasat & Dexter, 2001; Iacovou et al., 1995). Mustaffa and Beaumont (2004) argued that the Internet has eliminated the barriers caused by distance and time, and has offered the opportunity for businesses to study their competitors. Stockdale and Standing (2004) also identified some relevant benefits of Internet technology perceived by SMEs. For example, the Internet has enabled SMEs to be exposed to a wider range of markets, have greater opportunities for partnerships, and greater flexibility in administration and communication. Furthermore, the Internet provides 24/7 accessibility for information, lower transaction costs, efficient updating of information, and enables product and/or service differentiation in order to deliver better customer services. In addition, previous research discovered that SMEs can benefit from customers' participation in Internet commerce, and they were more likely to perform competitively, establish stronger business-to-customer relationships and find more confidence in Internet commerce (Poon, 2000).

Based on the Internet adoption model of Mehrtens et al. (2001), three types of perceived benefits were found as natural categories: relative advantage, communication, and as a business tool. The aspects of relative advantage and communication were identified by comparing the Internet with traditional methods of

doing businesses. Some of the sources of relative advantage included global resources of information and the advantage of a Website over traditional forms of advertising and retailing. The Internet was viewed not only as a source of information but a business tool to give a presence or build a company's image on the World Wide Web, and has become an essential part of everyday business for many organisations.

While the range of perceived benefits of the Internet is extensive, past studies indicated that not all of them applied to every SME, and the benefits were not being reaped by as many smaller companies as larger ones (Levy & Powell, 2003; Riquelme, 2002; Walczuch, Van Braven & Lundgren, 2000). However, empirical studies have suggested that perceived benefits of the Internet was one of the significant determinants between adopters and non-adopters (Chwelos et al., 2001; Gibbs & Kraemer, 2004; Iacovou et al., 1995; Lee & Cheung, 2004; MacKay, Parent & Gemino, 2004; Mehrtens et al., 2001; Pflughoeft, Ramanurthy, Soofi, Yasai-Ardekani & Zahedi, 2003; Scupola, 2003; Wang & Cheung, 2004). Thus, for the purpose of this paper, perceived benefits were included in the Internet adoption model as an explanatory factor.

2.3.2.2 Organisational Readiness

Organisational characteristics were some of the most frequently studied factors concerning technology adoption. Past literature revealed that organisational context was a source of structures, processes and attributes that influenced the uptake of new technological innovations (Scupola, 2003). Among the organisational attributes, financial and technological resources of the firm, employees' knowledge about the technology, owner manager's attributes, and firm size, were the main explanatory variables of technology adoption by SMEs (Beveren & Thomson, 2002; Gibbs & Kraemer, 2004; Iacovou et al., 1995; Lee & Cheung, 2004; Palvia & Palvia, 1999; Poon & Swatman, 1999; Premkumar & Roberts, 1999; Thong, 1999; Wang & Cheung, 2004). In terms of financial resources, Teo and Ranganathan (2004) suggested that annual IT investment had a stronger association than annual revenue with the adoption decision of business-to-business (B2B) E-Commerce. Similarly, Iacovou et al. (1995) found that firms were more likely to adopt Electronic Data Interchange (EDI) if they were organisationally ready, in terms of technological and financial readiness. Other studies (Lee, 2004; Looi, 2005) also showed that the extent of technology adoption in small businesses really relied on the financial situation or resources in the firm.

However, the aspect of financial resources was not raised as an issue and was

insignificant in some studies (Grandon & Pearson, 2004; Mehrtens et al., 2001). Mehrtens et al. (2001) reported that most small businesses carried out their own IT work instead of contracting out, and that there was no significant support found for the impact of financial resources on Internet adoption. Nor did they find any significant support for another organisational factor, firm size, as being influential. Grandon and Pearson (2004) believed that firm size was irrelevant to the study of Internet adoption by SMEs, due to the levelling effect of the technology.

Nevertheless, in the preliminary Internet adoption model, Mehrtens et al. (2001) identified three forms of organisational readiness as highly relevant to the adoption of the Internet: the level of IT knowledge among IT professionals; the level of IT knowledge among non-IT professionals; and the level of IT use within the organisation. Since small businesses were typically short of IT expertise, many businesses postponed the adoption until they had sufficient IT professionals. Empirical evidence showed that businesses with employees who had more knowledge of the technological innovation were likely to use more of the innovation (Thong, 1999). However, some studies revealed that the level of IT knowledge in IT professionals was not a significant influence on the adoption of the Internet. For example, Poon and Swatman (1997) argued that most of the IT work required was carried out by enthusiastic owners who did not receive any formal IT training before

adopting the Internet. The IT knowledge was usually gained through public media, friends, business partners or even their children. Furthermore, most of the IT work can be bought or the businesses can seek advice from people within the organisation with some IT knowledge (Mehrtens et al., 2001).

Regarding the level of IT knowledge among non-IT professionals, it was believed that the presence of an innovation champion, often people with a reasonable amount of knowledge and interest in technology, can provide the drive and effort to facilitate the technology adoption (Grandon & Pearson, 2004; Iacovou et al., 1995; Poon & Swatman, 1997; Seyal & Rahman, 2003; Teo & Ranganathan, 2004).

In relation to the level of IT use in the organisation, the literature supported the view that organisations that have high levels of IT knowledge and capabilities are more likely to adopt and implement Internet-enabled capabilities (Lertwongsatien & Wongpinunwatana, 2003). Moreover, firms with more sophisticated IT support usually were more likely to cope well with new technology, including the hardware, the software, and the expertise. In contrast, it was more difficult for firms with relatively low levels of IT support to integrate sophisticated information systems, and significant expenses were more likely to be incurred (Iacovou et al., 1995). Thus, it was expected that firms which had a higher level of organisational readiness were more likely to adopt Internet related technologies. A measure of organisational

readiness should therefore be included in the proposed research model.

2.3.2.3 External Pressure

External pressure was suggested by a number of researchers as influential to technological adoption by SMEs (Chwelos et al., 2001; Gibbs & Kraemer, 2004; Grandon & Pearson, 2004; Iacovou et al., 1995; Looi, 2005; Premkumar & Roberts, 1999; Scupola, 2003; Wang & Cheung, 2004). External pressure to adopt refers to the influential factors from outside the organisational environment, such as pressure from competitors, business partners, customers, employees, and/or governmental agencies (Chau & Hui, 2001; Iacovou et al., 1995). Several studies noted that most SMEs adopted new technologies only when they can see the immediate business opportunities or benefits for doing so, or because they were under pressure from their suppliers, clients and/or other technology-able firms (Gibbs & Kraemer, 2004; Kula & Tatoglu, 2003). The pressure from the interdependence of the world economy has challenged many existing suppliers with an increasing number of new players offering more and even cheaper raw materials, human resources, and finance in the global markets (Schlenker & Crocker, 2003). Other studies found that environmental pressure can also be from the government or the industry (Chau & Hui, 2001; Chwelos et al., 2001; Gibbs & Kraemer, 2004; Scupola, 2003). Government policy

can both stimulate and constrain the adoption of innovation. Stimulating innovation in a positive manner can be done by government incentives, subsidies, and/or promotion of the technology (Gibbs & Kraemer, 2004), whereas discouraging the adoption of the innovation in a negative manner was through imposing pressure (Chau & Hui, 2001; Scupola, 2003). Pressure from existing and potential customers, who generally expected the firm to have an e-mail address and a Website, was also noted in the literature (Gibbs & Kraemer, 2004; Iacovou et al., 1995; Looi, 2005; Mehrtens et al., 2001). In the context of EDI adoption, Chau and Hui (2001) stated that:

> "Industry influence is important in the small business context, as compared to large organisations, small firms tend to have fewer resources to build up their internal knowledge base on current technological trends and developments. They tend to rely on other business partners to assist in their decision-making … business partners' influence is most likely to be a significant factor in the EDI adoption decision by less powerful partners" (p.235).

In sum, empirical evidence showed that Internet adoption was strongly influenced by the external environment in the small business context. It is therefore reasonable to include external pressure in this research as one of the explanatory factors.

2.3.2.4 Types of Internet Usage

While a framework that could account for internal and external factors was needed for studying Internet-related adoption at the organisational level, several studies suggested that adoption behaviour may also be predicted through the types of Internet uses by SMEs (Clark, 2002; Kula & Tatoglu, 2003; Walczuch et al., 2000). In a study on net readiness in eight New Zealand industries, the level of Internet adoption and the sophistication of electronic business capabilities were illustrated by the number and types of website functions (Clark, 2002). It was found that while 60.9 percent of the New Zealand companies had websites, only 25 percent of these firms were capable of taking orders on their websites and 9 percent could handle transactions and payments online. In a similar study carried out in the Netherlands, Walczuch et al. (2000) noted that e-mail, searching for company Web sites, and randomly looking for information, were the most frequent Internet activities. In contrast, receiving orders from customers, voice/video-conferencing and placing job vacancies had the lowest usage percentage among SMEs (Kula & Tatoglu, 2003; Walczuch et al., 2000). Therefore, it was decided that this study should also investigate the types of Internet uses reported in SMEs.

2.3.3 Structural Factors

As the focus of this research was on the firm- and industry-specific responses, more attention was paid to the relationships between the Internet adoption factors and the structural factors, namely, levels of Internet support, business type, business size, international status of business, ownership of business (family business), years of experience on the Internet, and industry type. The following variables were included in the study to determine the role of structural factors on the adoption decision of SMEs.

2.3.3.1 Level of Internet Support

Previous studies suggested that levels of Internet adoption can be assessed by the levels of IT sophistication or support within a firm (Egan, Clancy & O'Toole, 2003; Ihlstrom & Nilsson, 2003; Lee & Cheung, 2004; Martin & Matlay, 2001; Poon and Swatman, 1997; Rao, Metts & Monge, 2003; Shiels, Mclvor & O'Reilly, 2003) For example, Rao et al. (2003) claimed that levels of Internet development can be divided into several stages, with each stage being more advanced in terms of levels of IT sophistication. Similarly, Martin and Matlay (2001) reported that the Department of Trade and Industry [DTI] of U.K. also developed an adoption ladder of Internet technology, to show how SMEs progressed from one stage to another in their

exploration and development of new communication technology. These levels of IT sophistication started with the simple use of e-mail as a way to communicate with customers and suppliers, through to the final goal of integrating the internal processes of a business through the use of the Internet (Martin & Matlay, 2001). Furthermore, Lefebvre, Harvey, and Lefebvre (1991) argued that one should realise that not all small businesses were the same, and their technology adoption models varied in relation to their level of technological advancement. Therefore, it was expected that levels of Internet support or sophistication within an organisation will have a positive effect on the decision to adopt the Internet. The following hypotheses (H 1.1 to 1.4) concerning levels of Internet support on Internet adoption were developed:

H 1.1 Organisations with increasing levels of Internet support will report increasing levels of *perceived benefits*.

H 1.2 Organisations with increasing levels of Internet support will report increasing levels of *organisational readiness*.

H 1.3 Organisations with increasing levels of Internet support will report increasing levels of *external pressure*.

H 1.4 Organisations with increasing levels of Internet support will report an increasing *number of Internet uses*.

2.3.3.2 Business Type (Legal Structure)

There are different legal structures for different types of businesses. In this study, the legal structures of businesses were categorised into the following groups, namely, limited enterprises, sole proprietors, partnerships, small corporations, and other types of SMEs. It was suggested that incorporating business type into the analysis of Internet adoption was a way to control the possible differences in SMEs between the various legal structures of businesses (Wang & Cheung, 2004). Thus, the following hypotheses were developed:

H 2.1 Organisations with different legal structures will report different levels of *perceived benefits*.

H 2.2 Organisations with different legal structures will report different levels of *organisational readiness*.

H 2.3 Organisations with different legal structures will report different levels of *external pressure*.

H 2.4 Organisations with different legal structures will report different *numbers of Internet uses*.

2.3.3.3 Business Size

Firm size has been one of the most common factors examined in the study of technological adoption in organisations. Previous research suggested that firm size was a major determinant of a firm's decision and involvement in adopting the Internet

(Dholakia & Kshetri, 2004; Lertwongsatien & Wongpinunwatana, 2003; Lertwongsatien, Wongpinunwatana & Achakulwisut, 2004; Palvia & Palvia, 1999; Poon & Swatman, 1999; Premkumar & Roberts, 1999; Thong, 1999; Wang & Cheung, 2004). Nevertheless, other studies found no significant support for this organisational factor (Grandon & Pearson, 2004; Mehrtens et al., 2001; Scupola, 2003). In order to examine whether firm size had a significant impact on Internet adoption in SMEs for this particular research, the following hypotheses were developed:

H 3.1 Large organisations will report higher levels of *perceived benefits* compared to small organisations.

H 3.2 Large organisations will report higher levels of *organisational readiness* compared to small organisations.

H 3.3 Large organisations will report higher levels of *external pressure* compared to small organisations.

H 3.4 Large organisations will report an increased *number of Internet uses* compared to small organisations.

2.3.3.4 International Business

Due to the phenomena of globalisation and IT technologies, SMEs are facing more challenges, as well as new opportunities in the global market. Past research reported that the international experience of a firm was one of the most significant factors influencing the extent of Internet adoption in SMEs. It was found that the SMEs with

a higher level of international experience had a higher level of Internet use (Kula & Tatoglu, 2003). Therefore, it was expected that there was a positive relationship between the extent of international experience of a firm and levels of Internet adoption. The following hypotheses were therefore developed:

H 4.1 Organisations engaged in international business will report higher levels of *perceived benefits* compared to organisations not engaged in international business.

H 4.2 Organisations engaged in international business will report higher levels of *organisational readiness* compared to organisations not engaged in international business.

H 4.3 Organisations engaged in international business will report higher levels of *external pressure* compared to organisations not engaged in international business.

H 4.4 Organisations engaged in international business will report an increased *number of Internet uses* compared to organisations not engaged in international business.

2.3.3.5 Family Business

There are significant differences in the size of SMEs, from businesses solely operated by the principal and/or his/her family, to businesses with around two hundred full-time equivalent employees. Thus, the ownership of business may also be an important factor in the involvement and decision process of Internet adoption or other

technological innovation adoptions. One study reported that the influence from family members played a key role in the adoption of Information Communication Technology (ICT) because they were likely to act as "information intermediaries" for those without access, experience, skill and/or desire to use ICT or similar technologies (Warren, 2004). Thus, the following hypotheses were developed:

H 5.1 Organisations that are family businesses will report different levels of *perceived benefits* compared to organisations that are not family businesses.

H 5.2 Organisations that are family businesses will report different levels of *organisational readiness* compared to organisations that are not family businesses.

H 5.3 Organisations that are family businesses will report different levels of *external pressure* compared to organisations that are not family businesses.

H 5.4 Organisations that are family businesses will report different *numbers of Internet uses* compared to organisations that are not family businesses.

2.3.3.6 Years on the Internet

Locke (2004) stated that the amount of experience of the owner/manager had on the technology adopted determined how well it was implemented. Dholakia and Kshetri (2004), and Golden, Hughes, and Ruane (2004) also found that a firm's previous exposure to and attitude towards the technology were some of the important determinants in the adoption decision of ICTs in SMEs. It was expected that there was a positive relationship between Internet adoption factors and a firm's experience of

the Internet in terms of years of Internet presence. The following hypotheses were developed:

H 6.1 Organisations that established an Internet presence prior to 2000 will report higher levels of *perceived benefits* compared to organisations that established an Internet presence during or after 2000.

H 6.2 Organisations that established an Internet presence prior to 2000 will report higher levels of *organisational readiness* compared to organisations that established an Internet presence during or after 2000.

H 6.3 Organisations that established an Internet presence prior to 2000 will report higher levels of *external pressure* compared to organisations that established an Internet presence during or after 2000.

H 6.4 Organisations that established an Internet presence prior to 2000 will report an increased *number of Internet uses* compared to organisations that established an Internet presence during or after 2000.

2.3.3.7 Comparisons of Industries

In one study on the levels of net readiness in eight New Zealand industries, while the net readiness score of the tourism industry was ahead of all the other industries studied, the retail industry scored in seventh place (Clark, 2001). Clark concluded that the industrial differences existing in the net readiness were due to the different nature of the product or service offered. The types of business operations also had significant impact on the types of technology solutions adopted (Begin & Boisvert, 2002).

Therefore, it would be interesting to find out more about the Internet adoption behaviour from an industry perspective. The following hypotheses were developed to investigate whether the SMEs in the tourism industry showed a higher level of Internet adoption than the SMEs in the retail industry:

C. 1 Tourism industry organisations will report higher levels of *perceived benefits* compared to retail industry organisations.

C. 2 Tourism industry organisations will report higher levels of *organisational readiness* compared to retail industry organisations.

C. 3 Tourism industry organisations will report higher levels of *external pressure* compared to retail industry organisations.

C.4 Tourism industry organisations will report higher *numbers of Internet uses* compared to retail industry organisations.

2.4 Summary

The factors regarding Internet adoption by SMEs in the New Zealand context, particularly from an industry perspective, have received little empirical attention. This chapter has examined the literature, and several hypotheses have been developed for testing in this context. Chapter three develops the research methodology for testing the research hypotheses. The proposed research model for the present study is presented in Figure 2.1.

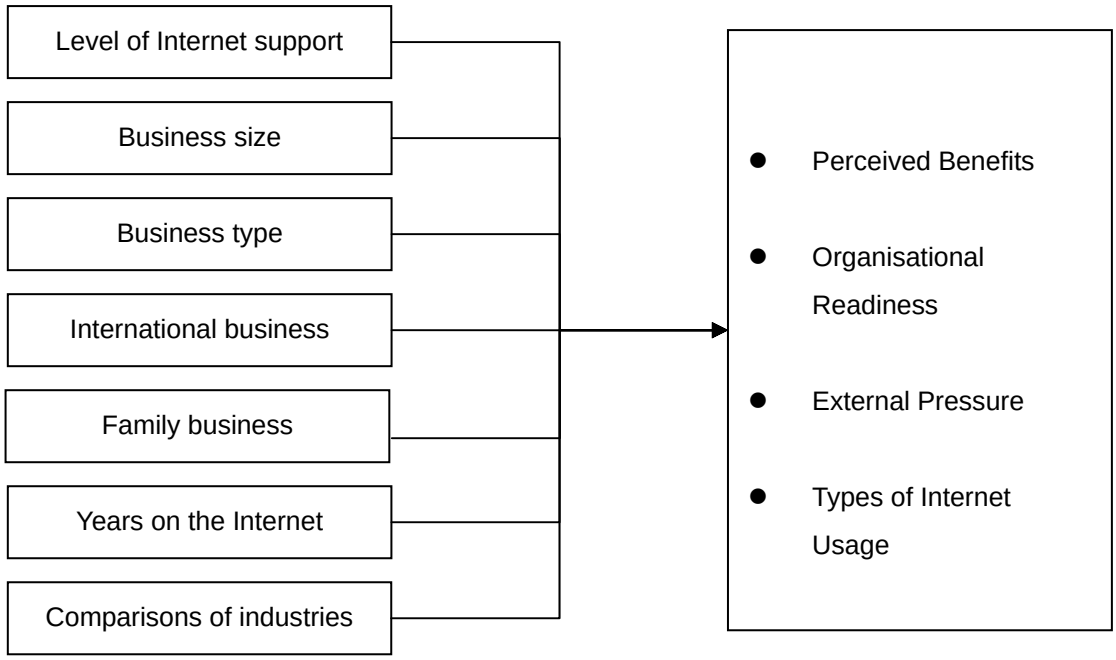

Figure 2.1 Proposed Research Model

Chapter 3

Methodology

This chapter outlines the methodology used and the process of data collection and analysis. This section begins with the research objective and then discusses the context of this research and the research method. Following this are the details of data collection process, and the chapter concludes with a discussion of research quality issues.

3.1 Introduction

3.1.1 Research Objective

The research objective of the current study is two-fold:

(1) To investigate the firm- and industry-specific factors that may influence Internet adoption among SMEs, particularly in the retail and the tourism industries.

(2) To identify any similarities and differences that exist with respect to the attitude towards Internet adoption in the two industries mentioned above.

3.1.2 Quantitative Research Method

"Quantitative research values objective observation, precise measurements, statistical analysis and verifiable truths. The hall marks of good quantitative research are reliability and validity" (Cavana, Delahaye & Sekaran, 2001, p. 186). In the present research, a quantitative research approach was chosen to study the factors of Internet adoption by SMEs in two industries in New Zealand, that is, the retail and the tourism industries. Adopting a quantitative research method is appropriate for the current study because the relationship between the concepts under investigation have become apparent. As Internet adoption has received extensive empirical attentions throughout the past decade, especially in terms of the adoption factors, it was anticipated that a quantitative method using questionnaires would be most appropriate for investigating firm- and industry-specific factors of Internet adoption in SMEs.

The attitudinal section of the survey was administered through mail. The main advantage of mail questionnaires is that a wider geographical area can be covered in the survey. Respondents can also complete the survey at their own convenience, unlike a survey administered in person, as organisations are often unable or unwilling to participate in data collection during working hours (Cavana et al., 2001). Despite the response rate using a mail questionnaire being typically low, questionnaires are able to provide a basis for generalising, allow for experimental replication, and give some degree of statistical power (Chau & Hui, 2001). Moreover, good quantitative

research can achieve rigorous reliability and validity (Cavana et al., 2001).

The research presented in this paper seeks to investigate the perception of industry-specific SMEs towards the factors influencing Internet adoption, and specifically, the study aims to answer the following questions: (1) What are the firm- and industry-specific factors that may influence Internet adoption among SMEs, particularly in the retail and the tourism contexts? (2) What are the similarities and differences that exist with respect to the attitude towards Internet adoption in these two industries? In order to answer these questions, the mail questionnaire method was chosen for this study so as to allow the study to be easily replicated and thus the findings to be reconfirmed or disconfirmed. The questionnaire was also designed to capture some of the information about organisational characteristics and Internet use profile, that is, the number of full-time employees, type of business, involvement in international business, years of international experience, levels of IT support, types of Internet uses, and years on the Internet.

3.2 Data Collection

3.2.1 Participants

Subjects of the survey were SMEs with 200 or less full-time employees nationwide in New Zealand. The samples were drawn from the database of Canterbury Employers' Chamber of Commerce, Tourism Industry Association of New Zealand [TIANZ], and some online business directories. Borrowing from Mehrtens et al. (2001), the organisations selected needed to have adopted at least one of the following forms of Internet usage: e-mail, internet browsing, or a website for business purposes. If this criteria was not met, the survey responses were excluded from the data analysis. The respondents had to be those holding management positions, preferably CEOs and owner managers, and who had been key to the decision on the adoption of Internet technologies. The high hierarchical levels of respondents provided some assurance on the validity of responses, since the respondents in senior management levels could generally be expected to be more knowledgeable about, and also more responsible for, their firms' Internet activities than those from lower levels. Moreover, this would ensure that the attitudes reflected in the questionnaire are as reflective as possible of the person carrying out the relevant decision-making.

3.2.2 Sample Size

Cavana et al. (2001) suggested that sample size between 30 and 500 would be appropriate for most research. In order to decide a suitable sample size, the following conditions were considered: (1) the extent of precision desired; (2) the acceptable risk in predicting that level of precision; (3) the amount of variability in the population itself; (4) the cost and time constraints; and (5) the size of the population (Cavana et al., 2001). Therefore, in order to achieve a greater generalisability, usefulness and value for the research, it was decided to select five hundred small- to medium-sized organisations from the retail industry, five hundred tourism SMEs from online databases, and another five hundred tourism SMEs from the members of TIANZ.

The survey was conducted from September to December 2005 on 1,500 randomly selected firms across the retail and the tourism industries throughout New Zealand. The five hundred retail SMEs were randomly drawn from two sources, one was from online databases and the other was from Canterbury Employers' Chamber of Commerce. The first set of five hundred tourism SMEs was also randomly drawn from online business directories and online databases. The list of another five hundred SMEs was provided by the Tourism Industry Association of New Zealand.

3.2.3 Data Collection

The researcher sent the questionnaire along with an invitation letter to each of the chosen participants of this study (See Appendix A and B for the invitation letter and questionnaire respectively). The letter introduced the objective of this study, addressed issues of confidentiality, and highlighted the contribution the respondents would make to this study. The first 500 survey forms were sent to the retail participants in September 2005 and the second set of 500 survey forms were sent to the tourism participants in October 2005. Another 500 forms were sent to the tourism participants provided by TIANZ in mid November 2005. The data collection period began in October and finished in December 2005. There were one thousand and five hundred invited participants overall. One hundred and thirty-two completed surveys were returned from the retail industry, and among them, there were one hundred and thirty usable questionnaires, yielding a response rate of 26.4 percent. For the first set of tourism firms, one hundred and thirty-eight completed survey forms were returned, and among those, only one questionnaire was unusable, yielding a response rate of 27.6 percent. For the second set of tourism firms from TIANZ, there were one hundred and ninety-six returned survey forms, and among them, one hundred and ninety-three were usable, yielding a higher response rate of 39.2 percent.

3.3 Measures

Mehrtens et al. (2001) have already pinpointed most of the variables that were used in this study. Table 3.1 shows the definitions of the three main variables in their Internet adoption model, which were also adopted as questionnaire items in this research. Each variable was measured using a five-point Likert scale ranging from strongly disagree (1), disagree (2), neutral (3), agree (4), to strongly agree (5). Other structural factors identified in previous studies, such as those by Kula and Tatoglu, (2003) and Lefebvre et al. (1991), which might affect the decision of Internet adoption, were also included in the questionnaire to better attain the research objectives.

Measurement of a variable must be reliable to be useful and yield stable results. For each variable, the reliability or internal consistency was assessed by calculating the Cronbach alpha coefficient. For the scales of perceived benefits, Cronbach's alpha was 0.85, and the standardised item alpha was 0.86. For the scales of organisational readiness, Cronbach's alpha was 0.66, and the standardised item alpha was 0.66. For the scales of external pressure, Cronbach's alpha was 0.65, and the standardised item alpha was 0.64. Table 3.2 provides a summary of item-total correlation and correlation if item was deleted for the nineteen research variables under this investigation.

Table 3.1 SME Internet Adoption Model (Source: Mehrtens et al., 2001, p. 171)

Factors	Definition
Perceived Benefits	Efficiency benefits from the relative advantage of the internet over traditional methods (phone, fax and post) of communicating with customers and others, and internally. Often a cheap way of, e.g. answering customer queries, sending and receiving files, and providing a current catalogue of products and prices. An effective way for employees to gather information, e.g. about competitors, government regulations, products, and supplier stock levels. A business tool to build the firm's image and to promote it nationally and internationally.
Organisational Readiness	Level of Internet knowledge among non-IT professional, rather than IT professionals. Often an owner manager who was internet aware, and would sponsor or even champion the internet adoption. Adequate computer systems within the firm to access and use the internet without major problems.
External Pressure	Pressure from existing internet users, particularly customers, but also suppliers and potential employees, who expect the firm to be an internet user and wanted them to communicate electronically.

Table 3.2 Reliability Coefficients

	ITC*	AID
Perceived Benefits		
The Internet is an efficient way of communicating with customers.	.66	.83
An organization can actually experience competitive advantage through the Internet.	.61	.83
The Internet improves the organizational relationship with customers and/or suppliers.	.62	.83
The Internet is an efficient way of communicating with suppliers.	.49	.84
The Internet is an economic way of answering customer queries.	.66	.83
The Internet is an economic way of delivering product information.	.61	.83
The Internet is an effective way to gather market- and competitor- related information.	.49	.84
The Internet improves business performance in terms of sales revenue and/or profits.	.60	.83
The Internet is a useful business tool to build brand image and promote the company's image.	.55	.83
The Internet is an efficient way of communicating with employees.	.36	.86
Organisational Readiness		
The size of the company has a major impact on Internet adoption.	.38	.62
The amount of financial resources of the company has a major impact on Internet adoption.	.41	.61
The level of IT knowledge among non-IT professionals has a major impact on Internet adoption.	.42	.61
The level of IT knowledge among IT professionals has a major impact on Internet adoption.	.46	.58
The extent of IT use within the company has a major impact on Internet adoption.	.39	.62
External Pressure		
Competitive intensity with the industry has a major impact on the decision to adopt the Internet.	.34	.63
Pressure from suppliers has a major impact on the decision to adopt the Internet.	.54	.49
Pressure from potential employees has a major impact on the decision to adopt the Internet.	.36	.62
Pressure from customers has a major impact on the decision to adopt the Internet.	.48	.54

* ITC = Item-Total Correlation; AID = Alpha If Item Deleted

Because most of the research constructs used in this study were taken from the definitions of Mehrtens et al.'s (2001) Internet adoption model and have not previously been used as questionnaire items, it was decided to utilise principle-components factor analysis for each set of the constructs. Table 3.3 gives the result of the factor correlation matrix. The result showed that there was only one factor for the scales of perceived benefits, suggesting that the items were reasonably consistent with explaining this particular dependent variable of Internet adoption. For organisational readiness, the factor analysis showed that there were two clear factors (Factor 1 and 2) extracted. For factor 1, there were three IT-related organisational readiness variables, and for factor 2, there were two non-IT-related organisational readiness variables. Finally, the result of the factor analysis again shows only one factor for the external pressure scale. Therefore, all the scales were reasonably consistent with explaining this dependent variable of Internet adoption (See Table 3.3).

The following section will introduce the dependent variables and the questionnaire items used in this research.

Table 3.3 Factor Analysis

Perceived Benefits	Factor 1	Factor 2
The Internet is an efficient way of communicating with customers	.77	
The Internet is an economic way of answering customer queries	.76	
The Internet improves the organizational relationship with customers and/or suppliers	.73	
An organization can actually experience competitive advantage through Internet technologies	.72	
The Internet is an economic way of delivering product information	.72	
The Internet improves business performance in terms of sales revenue and/or profits.	.71	
The Internet is a useful business tool to build brand image and promote the company's image.	.66	
The Internet is an efficient way of communicating with suppliers.	.58	
The Internet is an effective way to gather market- and competitor-related information.	.58	
The Internet is an efficient way of communicating with employees.	.44	
Organisational Readiness		
The extent of IT use within the company has a major impact on Internet adoption.	**.80**	.02
The level of IT knowledge among IT professionals has a major impact on Internet adoption.	**.77**	.17
The level of IT knowledge among non-IT professionals has a major impact on Internet adoption.	**.75**	.13
The amount of financial resources of the company has a major impact on Internet adoption.	.13	**.86**
The size of the company has a major impact on Internet adoption.	.10	**.86**
External Pressure		
Pressure from suppliers has a major impact on the decision to adopt the Internet.	.79	
Pressure from customers has a major impact on the decision to adopt the Internet.	.75	
Pressure from potential employees has a major impact on the decision to adopt the Internet.	.63	
Competitive intensity with the industry has a major impact on the decision to adopt the Internet.	.60	

3.3.1 Dependent Variables

Perceived Benefits

Based on Mehrtens et al.'s model (2001), perceived benefits of the Internet comprised three categories: relative advantage, communication, and as a business tool. Due to the fact that connectivity is highly relevant in gaining competitive advantage, many studies indicated that Internet-enabled capabilities have increased the competitive advantage of SMEs in the global market (Braun, 2002; Clark, 2002; Jeffcoate, Chappell & Feindt, 2002). Poon (2000) added that the relationship with customers can actually be improved if there is a high percentage of customers participating in the online business transactions. Furthermore, empirical evidence showed that Internet-enabled capabilities could actually improve business performance in terms of profit and/or revenue in small and medium businesses (Lefebvre, Mason, & Lefebvre, 1997). Thus, these factors were included as perceived benefits in this particular study. The importance of perceived benefits on the decision to adopt Internet technologies was measured using the five-point Likert scale and the questionnaire items were:

The Internet is:

- An efficient method of communication with customers;
- An efficient method of communication with suppliers;
- An efficient method of communication with employees;

- An economic way of answering customer queries;
- An economic way of delivering product information;
- An effective way to gather market- and competitor-related information;
- A useful business tool to build brand image and promote the company's image;
- An improvement to the business performance in terms of sales revenue and/or profits;
- An improvement to the organisational relationship with customers and/or suppliers; and
- A tool that allows an organisation to actually experience competitive advantage through Internet technologies.

Organisational Readiness

The three forms of organisational readiness that were relevant to the adoption of the Internet were: the level of IT knowledge among IT professionals; the level of IT knowledge among non-IT professionals; and the level of IT use within the organisation. Past literature claimed that firm size (Lefebvre et al., 1991; Premkumar & Roberts, 1999; Wang & Cheung, 2004) and financial resources allocation (Iacovou et al., 1995; Kula & Tatoglu, 2003; Lee, 2004) imposed a strong impact on the

decision to adopt technology innovations, therefore these factors were also taken into account in this research. This organisational readiness variable was measured using the five-point Likert scale as above and the questionnaire items were:

The level of IT knowledge among:

- IT professionals in the company have a major impact on the decision to adopt the Internet;
- Non-IT professionals, in particular, the owners or other innovation champions, have a major impact on the decision to adopt the Internet; and
- The extent of IT use within the company (eg. whether there are adequate computer systems to access and use the Internet without major problems) has a major impact on the decision to adopt the Internet.

In addition,

- The size of the company has a major impact on the decision to adopt the Internet, and
- The amount of financial resources of the company has a major impact on the decision to adopt the Internet.

External Pressure

Mehrtens et al. (2001) found that pressure emanated not only from existing Internet users, in particular, customers, but also from suppliers and potential employees, who demanded the firm be accessible via the Internet. Lee (2004) indicated that many firms adopted innovations because their competitors were doing so. Thus, it was the combination of strategic necessity and competitive intensity within the industry that drove the adoption decision among SMEs. Kula and Tatoglu (2003) also found that competitive intensity was one of the underlying industry-specific factors to Internet adoption among SMEs. Therefore, this factor was also examined in this study. The variable of external pressure was measured using the same Likert scale mentioned earlier. The questionnaire items under this variable were:

Pressure from:

- Customers have a major impact on the decision to adopt the Internet;
- Suppliers have a major impact on the decision to adopt the Internet; and
- Potential employees have a major impact on the decision to adopt the Internet.

In addition,

- Competitive intensity within the industry has a major impact on the decision to adopt the Internet.

Types of Internet Usage

Several studies suggested that the adoption behaviour of SMEs may also be predicted through the types of Internet uses (Clark, 2002; Kula & Tatoglu, 2003; Walczuch et al., 2000). Therefore, thirteen of Walczuch et al.'s (2000) measures of uses of the Internet were used to evaluate the adoption behaviour. Table 3.4 shows the types of uses of the Internet for SMEs. The number of Internet uses was also investigated.

Table 3.4 Types of Internet Usage (Source: Walczuch et al., 2000, p. 567)

External communication/E-mail
Randomly looking for information
Offering information to consumers on Website
Obtaining information from suppliers
Receiving orders from customers
Searching for Webpage addresses
Product and market research
Contacting government agencies
Sending purchase orders to suppliers
Offering online payment options
Internal communication/Intranet
Placing job vacancies
Voice/Video conferencing

3.3.2 Independent Variables

Level of Internet Support

Business can be categorised into six groups according to the level of Internet support within a firm (Daniel, Wilson, & Myers, 2002; Ihlstrom & Nilsson, 2003; Rao et al., 2003). The variables were measured using a category scale which employs multiple items to obtain a single response (Cavana et al., 2001).

- Business has no Internet connection.
- Business has Internet connection but no business web page.
- Business has a basic web page but no permanent Internet connection.
- Business has a basic web page and a permanent Internet connection.
- Business has a web page with an online catalogue.
- All business transactions and payments can be done through the web page.

Business Type

For the purpose of this study, the respondents were asked to categorise their businesses into the following five types of legal structure: Sole proprietor, partnership, small corporation, limited enterprise, and other.

Business Size

According to Mehrtens et al. (2001), SMEs were firms with 200 or less full-time equivalent employees (FTE). Thus, the firm size was broken down into three categories, from 1-20, 21-99 to 100-200 FTEs.

International Business

The respondents were asked to indicate whether their business was an international business. International business meant either that the firm had international customers or was trading in overseas countries. The respondents were asked to answer “yes,” “no,” or “in the near future.” For responses that answered they were an international business, they were further asked to identify the number of year(s) of their international experience by an open-ended question.

Family Business

Firms that had 20 full-time equivalent employees or less were further asked to indicate whether their employees were all from one family by answering “yes” or “no.”

Years on the Internet

An open-ended question was used for the year that the firm first started to use the Internet (e.g., 1999).

3.3.3 Open-Ended Comments

The last section of the questionnaire provided a space where the respondents could make a comment on any issue in relation to Internet adoption in their businesses or among SMEs in general. This was an open-ended question and ample space was provided for comments.

3.4 Research Quality

To ensure the quality of this research, efforts were made to confirm the reliability and validity of the research. The reliability of a measure was established by testing both consistency and stability. Cronbach's alpha is a reliability coefficient that analyses how well the items in a set are positively correlated to one another (Cavana et al., 2001). The internal consistency reliability estimates of the scales of perceived benefits, organisational readiness and external pressure (using Cronbach's alpha) across the two industries were 0.85, 0.66 and 0.65 respectively. The Cronbach alpha coefficients were within the guidelines set by Van de Ven and Ferry (1980), ranging from 0.50 to

0.85, thus establishing reasonable internal consistencies. Furthermore, the research constructs were also examined by factor analysis, and the result showed that all of the scales were reasonably consistent and valid in explaining the constructs of Internet adoption.

3.5 Summary

This chapter began with the research objectives, and then discussed the research method for the research project. It was anticipated that the research will attain more insights into the current topic of interest of SME Internet adoption, particularly in the New Zealand context. Further analysis was done to identify any similarities and/or differences that existed between the two groups of samples. The research design and methodology were chosen, with justification, to investigate the research questions. Data collection procedures, instrument validity and research quality were also discussed. The next section will present the results of the data analysis.

Chapter 4

Results

This chapter reports the results of a series of analyses of the data collected in the study. The first section presents an analysis of the whole sample, the second section presents an analysis of the retail sector sample, and the third presents an analysis of the tourism sector sample. The fourth section presents a comparison between the retail and tourism sectors. The final section then presents a summary of the chapter, including a summary of the tests of the hypotheses developed in Chapter 2.

4.1 Whole Sample

Table 4.1.1 summarises the overall structure of the sample of SMEs who participated in the study. This shows that approximately two thirds of the SMEs who participated were limited enterprises (65.6%), 12.2 percent indicated they were sole proprietors, and partnerships and small corporations together represented about one-fifth of the sample (19.2%). Fourteen firms (3.1%) indicated that they were other types of firms, such as charitable or non-for-profit organisations.

Overall, more than half of the SMEs reported that they were an international business (56.8%), that is, they either had international customers or were trading in

overseas countries. A small percentage of firms (2.8%) indicated that they would become internationally focused in the near future. The average number of years of international experience was 18.6 years.

For the year ending 2005, the majority of firms (84.5%) had twenty or less full time employees (FTEs), and about one eighth (13.1%) had FTE numbers between 20 and 99. Only a small percentage (2.4%) had FTE numbers between 99 and 200. About 20 percent of firms indicated that all of their employees were from the same family. The earliest year in which SMEs started to use the Internet as a business tool was 1988, with a median year of 1999.

Table 4.1.1 Sample Structure – Whole Sample

	Frequency	Valid Percent
Business Type		
Limited Enterprise	301	65.6%
Sole Proprietor	56	12.2%
Partnership	48	10.5%
Small Corporation	40	8.7%
Other	14	3.1%
International Business		
Yes	260	56.8%
No	198	43.2%
Full Time Employee Number		
1 to 20	387	84.5%
21 to 99	60	13.1%
100 to 200	11	2.4%
All Employees Are Family Members		
No	323	80.3%
Yes	79	19.7%

As discussed in Chapter 3, six levels of Internet support were identified, ranging from no Internet connection through to a system where all business transactions and payments can be done on the firm's website. Table 4.1.2 shows that one-third (33.7%) of the SMEs had a webpage with an online catalogue, and around one-third (31.1%) had a basic website with a permanent Internet connection. Only 20.4 percent of the firms were able to offer all business transactions and payments through their website.

The frequencies of the various types of Internet use by the whole sample of SMEs are displayed in Table 4.1.3. As this table shows, the five most frequent uses of the Internet were external communication or E-mail (97.0%), randomly looking for information (85.9%), offering information to consumers on website (85.9%), obtaining information from suppliers (80.4%), and receiving orders from customers (80.4%). The least frequent uses of the Internet overall were internal communication or Intranet (33.7%), placing job vacancies online (26.5%) and voice/video conferencing using the Internet (6.5%). This result is likely to be due to the size of the companies and lack of Information Technology knowledge and resources.

Table 4.1.4 shows the total number of Internet uses by the SMEs. The average number of uses was 7.8. Only three firms (0.7%) indicated that they were using all of the 13 Internet activities illustrated in the questionnaire, and the most frequent number was 10 Internet activities (15.7%). One firm indicated that they did not use any of the Internet activities specified in the survey and was excluded from further analysis.

Table 4.1.2 Level of Internet Support – Whole Sample

	Frequency	Valid Percent
No Internet connection	3	0.7%
Internet connection without website	41	8.9%
Basic website without permanent Internet connection	24	5.2%
Basic website with permanent Internet connection	143	31.1%
Business website with online catalogue	155	33.7%
All transactions/payments can be done on website	94	20.4%

Table 4.1.3 Types of Internet Usage – Whole Sample

	Frequency	Valid Percent
External communication / E-mail	446	97.0%
Randomly looking for information	395	85.9%
Offering information to consumers on website	395	85.9%
Obtaining information from suppliers	370	80.4%
Receiving orders from customers	370	80.4%
Searching for webpage addresses	325	70.7%
Product and market research	307	66.7%
Contact with government agencies	248	53.9%
Sending purchase orders to suppliers	222	48.3%
Offering online payment options	206	44.8%
Internal communication/Intranet	155	33.7%
Placing job vacancies	122	26.5%
Voice / Video conferencing	30	6.5%

Table 4.1.4 Number of Internet Uses – Whole Sample

	Frequency	Valid Percent
1	3	0.7%
2	13	2.8%
3	15	3.3%
4	23	5.0%
5	30	6.5%
6	44	9.6%
7	63	13.7%
8	63	13.7%
9	71	15.4%
10	72	15.7%
11	40	8.7%
12	19	4.1%
13	3	0.7%

4.1.1 Levels of Internet Support

A one-way analysis of variance (ANOVA) was undertaken on the levels of Internet support offered by the business (Level 0 – no Internet connection - was excluded from the analysis) and the results are shown in Table 4.1.5. The ANOVA showed there were significant differences in perceived benefits, external pressure, and number of Internet uses. Post-hoc tests using Scheffe indicated that for perceived benefits, differences existed between levels one (Internet connection without website) and three (basic website with permanent Internet connection), between one and four (business website with online catalogue), between one and five (all transactions/payments can be done on website), between two (basic website without permanent Internet connection) and five, between three and five, and between four and five.

Table 4.1.5 Summary of ANOVA Analyses for Levels of Internet Support Whole Sample

	1*	2	3	4	5	F	df	p
Perceived benefits	3.69	3.70	4.05	4.04	4.29	10.38	4	**p<0.001**
	(0.63)	(0.62)	(0.59)	(0.61)	(0.45)			
Organisational readiness	3.11	2.96	2.98	3.06	3.11	0.39	4	ns
	(0.90)	(0.82)	(0.71)	(0.76)	(0.65)			
External pressure	2.64	2.75	3.00	3.08	3.19	3.89	4	**p<0.01**
	(0.73)	(0.65)	(0.73)	(0.79)	(0.70)			
Number of uses of Internet	5.29	6.63	7.52	8.17	9.26	23.23	4	**p<0.01**
	(2.22)	(2.39)	(2.42)	(2.32)	(1.97)			
Organisational readiness	2.90	2.46	2.51	2.56	2.40	1.77	4	ns
(Non IT Resources)	(1.14)	(1.05)	(1.02)	(1.08)	(1.00)			
Organisational readiness	3.25	3.32	3.28	3.36	3.60	2.27	4	ns
(IT Resources)	(0.93)	(0.91)	(0.80)	(0.89)	(0.73)			

* 1 – Internet connection without website
2 – Webpage without permanent Internet connection
3 – Webpage with permanent Internet connection
4 – Webpage with online catalogue
5 – All transactions and payments through website

For external pressure, the differences were found between levels one and four and between levels one and five. For both variables, increased levels of Internet support were associated with increased levels of perceived benefits and external pressure. Furthermore, the significant differences found in the number of Internet uses were between levels one and three, between levels one and four, between levels one and five, between levels two and four, between levels two and five, between levels three and five; and between levels four and five. Increased levels of Internet support were associated with a higher number of Internet uses.

4.1.2 Business Type

For the analysis of business type (legal structure), one-way ANOVA was used, excluding business type 5 (other) due to the low number of responses in this category.

Table 4.1.6 Summary of ANOVA Analyses for Business Type – Whole Sample

	1*	2	3	4	F	df	p
Perceived benefits	4.04	3.98	3.96	4.05	0.32	3	ns
	(0.72)	(0.79)	(0.50)	(0.57)			
Organisational readiness	3.14	2.99	3.22	3.00	1.30	3	ns
	(0.75)	(0.78)	(0.75)	(0.72)			
External pressure	3.03	3.01	3.06	2.99	0.13	3	ns
	(0.71)	(0.76)	(0.71)	(0.76)			
Number of uses of Internet	6.43	6.40	7.75	8.26	13.71	3	**p<0.001**
	(2.96)	(2.65)	(2.08)	(2.37)			
Organisational readiness	2.75	2.47	2.79	2.48	2.40	3	ns
(Non-IT Resources)	(1.07)	(1.13)	(1.10)	(1.04)			
Organisational readiness	3.38	3.32	3.46	3.35	0.27	3	ns
(IT resources)	(0.88)	(0.96)	(0.79)	(0.82)			

* 1 – Sole proprietor
2 – Partnership
3 – Small corporation
4 – Limited enterprise

The results are summarised in Table 4.1.6. A significant difference was found only for the number of Internet uses, and a Scheffe test showed the differences were between type one (sole proprietor) and four (limited enterprise), and between type two (partnership) and four. In both cases, SMEs that were limited enterprises had a higher number of Internet uses.

4.1.3 Business Size

For business size, independent sample t-tests were conducted – group one had between 1 and 20 FTEs and group two had between 21 and 200 FTEs. The result showed that significant differences existed in organisational readiness, external pressure, the number of Internet uses, and organisational readiness – non-IT resources (See Table 4.1.7). For all these significant variables, higher scores were associated with businesses with more FTEs.

Table 4.1.7 Summary of t-Test Analyses for Business Size – Whole Sample

	1 to 20 (M, sd, N)	21 to 200 (M, sd, N)	t-value	df	p
Perceived benefits	4.04 (0.62) (372)	4.04 (0.51) (71)	0.04	441	ns
Organisational readiness	3.01 (0.73) (372)	3.24 (0.73) (70)	2.45	440	**p<0.05**
External pressure	2.99 (0.75) (377)	3.18 (0.76) (70)	1.98	445	**p<0.05**
Number of uses of Internet	7.58 (2.59) (387)	9.04 (2.02) (71)	4.52	456	**p<0.001**
Organisational readiness (IT Resources)	3.34 (0.84) (373)	3.54 (0.81) (70)	1.91	441	ns
Organisational readiness (Non-IT Resources)	2.50 (1.07) (386)	2.80 (1.01) (71)	2.20	455	**p<0.05**

4.1.4 International Business

A series of t-tests were conducted to determine if there were any significant differences between international businesses (defined as either had international customers or were trading in overseas countries) and non-international businesses (see Table 4.1.8). There were significant differences found in perceived benefits, external pressure, number of Internet uses, and organisational readiness (non-IT resources). For all variables with significant differences, except for organisational readiness (non-IT resources), higher scores were associated with the business having an international focus.

Table 4.1.8 Summary of t-Test Analyses for International Business Whole Sample

	No (M, sd, N)	Yes (M, sd, N)	t-value	df	p
Perceived benefits	3.83 (0.61) (177)	4.20 (0.56) (253)	6.47	428	**p<0.001**
Organisational readiness	3.09 (0.73) (181)	3.01 (0.74) (249)	1.08	428	ns
External pressure	2.80 (0.71) (180)	3.18 (0.74) (254)	5.47	432	**p<0.001**
Number of uses of Internet	6.93 (2.68) (185)	8.53 (2.21) (260)	6.89	443	**p<0.001**
Organisational readiness (IT Resources)	3.33 (0.84) (181)	3.40 (0.84) (250)	0.78	429	ns
Organisational readiness (Non-IT Resources)	2.72 (1.03) (185)	2.42 (1.07) (259)	2.95	442	**p<0.01**

4.1.5 Family Business

An investigation of SMEs with all full-time employees from one family (considered to be a family business) was conducted, and the t-tests showed that the only statistically significant difference was found in the number of Internet uses, with non-family businesses having a higher number than family businesses. Table 4.1.9 shows the results of the analyses.

Table 4.1.9 Summary of t-Test Analyses for Family Business – Whole Sample

	No (M, sd, N)	Yes (M, sd, N)	t-value	df	p
Perceived benefits	4.01 (0.62) (314)	4.14 (0.50) (74)	1.68	386	ns
Organisational readiness	3.03(0.76) (314)	3.00 (0.68) (73)	0.38	385	ns
External pressure	2.98 (0.76) (320)	3.03 (0.68) (75)	0.60	393	ns
Number of uses of Internet	7.80 (2.53) (323)	7.03 (2.55) (79)	2.43	400	**p<0.05**
Organisational readiness (IT Resources)	3.37 (0.86) (315)	3.25 (0.84) (73)	1.10	386	ns
Organisational readiness (Non-IT Resources)	2.52 (1.06) (322)	2.58 (1.04) (79)	0.42	399	ns

4.1.6 Year Established Internet Presence

The samples of SMEs were divided into two groups – those who had an Internet presence prior to 2000, and those who established an Internet presence in 2000 or after. The t-tests showed that statistically significant differences were found for perceived benefits, external pressure, and the number of Internet uses (see Table 4.1.10). For all variables with significant differences, higher scores were associated with businesses with an earlier Internet presence.

Table 4.1.10 Summary of t-Test Analyses for Year Established Internet Presence Whole Sample

	Prior to 2000 (M, sd, N)	2000 & after (M, sd, N)	t-value	df	p
Perceived benefits	4.09 (0.58) (264)	3.97 (0.64) (181)	1.99	443	**p<0.05**
Organisational readiness	3.06 (0.71) (262)	3.03 (0.77) (182)	0.40	442	ns
External pressure	3.09 (0.74) (266)	2.92 (0.77) (183)	2.35	447	**p<0.05**
Number of uses of Internet	8.25 (2.42) (272)	7.16 (2.64) (188)	4.56	458	**p<0.001**
Organisational readiness (IT Resources)	3.41 (0.82) (263)	3.32 (0.87) (182)	1.01	443	ns
Organisational readiness (Non-IT Resources)	2.53 (1.03) (271)	2.57 (1.10) (188)	0.36	457	ns

4.2 Retail Sector

Table 4.2.1 summarises the overall structure of the sample of retail SMEs who participated in the study. This shows that approximately three-quarters of the SMEs who participated were limited enterprises (76.2%), 10.8 percent indicated they were sole proprietors, 6.2 percent were partnerships, and 6.2 percent were small corporations. Only one firm indicated it was a charitable or non-for-profit organisation.

Most retail SMEs (82.3%) did not have an international focus (either having international customers or trading in overseas countries). A small percentage of firms (3.8%) said they would become an international business in the near future. For the 23 firms that indicated they were international, the average number of years of international experience was 22.9 years.

For the year 2005, the majority of the firms (85.4%), indicated they had 20 or less full time employees (FTE), 11.5 percent had between 20 to 99 FTEs, and only a small percentage (3.1%) had FTE number greater than 99. The majority of firms (92.6%) did not have all members from the one family. The earliest year in which retail SMEs started to use the Internet as a business tool was 1990, with a median year of 1999.

For the level of Internet support offered by the business, 38.5 percent had a business webpage with an online catalogue. Only 7.7 percent indicated that all their business transactions and payments could be done through the webpage. The levels of Internet support offered by retail SMEs are shown in Table 4.2.2.

Table 4.2.1 Sample Structure – Retail Sample

	Frequency	Valid Percent
Business Type		
Limited enterprise	99	76.2%
Sole proprietor	14	10.8%
Partnership	8	6.2%
Small corporation	8	6.2%
Other	1	0.8%
International Business		
No	107	82.3%
Yes	23	17.7%
Full Time Employee Number		
1 to 20	111	85.4%
21 to 99	15	11.5%
100 to 200	4	3.1%
All Employees Are Family Members		
No	112	92.6%
Yes	9	7.4%

Table 4.2.2 Level of Internet Support – Retail Sample

	Frequency	Valid Percent
No Internet connection	2	1.5%
Internet connection without website	22	16.9%
Basic website without permanent Internet connection	10	7.7%
Basic website with permanent Internet connection	36	27.7%
Business website with online catalogue	50	38.5%
All transactions/payments can be done on website	10	7.7%

Frequencies of Internet uses by retail SMEs are shown in Table 4.2.3. The results show that SMEs adopting the Internet predominantly use it as a way of external communication or E-mail (93.8%). Many firms used the Internet for randomly looking for information (84.6%), while 80 percent used it to obtain information from suppliers. Some uses had lower levels reported. Close to a third (32.3%) of the firms offered online payment options to their customers, and about a quarter (23.1%) placed their job vacancies online. Voice and/or video conferencing was not popular, with only 3.1 percent of the firms using it.

Table 4.2.3 Types of Internet Usage – Retail Sample

	Frequency	Valid Percent
External communication / E-mail	122	93.8%
Randomly looking for information	110	84.6%
Obtaining information from suppliers	104	80.0%
Receiving orders from customers	97	74.6%
Offering information to consumers on website	96	73.8%
Searching for webpage addresses	79	60.8%
Product and market research	72	55.4%
Sending purchase orders to suppliers	62	47.7%
Contact with government agencies	53	40.8%
Internal communication / Intranet	48	36.9%
Offering online payment options	42	32.3%
Placing job vacancies	30	23.1%
Voice / Video conferencing	4	3.1%

Table 4.2.4 shows the average number of Internet uses for retail firms. Among the 13 Internet activities, no firm indicated that they were using all of them. The average number of uses was 7.1. One firm indicated that they did not adopt the Internet in any form specified in the questionnaire and was excluded from further analysis.

Table 4.2.4 Number of Internet Uses – Retail Sample

	Frequency	Valid Percent
1	2	1.5%
2	6	4.6%
3	9	6.9%
4	6	4.6%
5	7	5.4%
6	20	15.4%
7	20	15.4%
8	16	12.3%
9	15	11.5%
10	17	13.1%
11	6	4.6%
12	5	3.8%

4.2.1 Levels of Internet Support

A series of one-way analysis of variance (ANOVA) tests were undertaken on the levels of Internet support offered by retail SMEs (Level 0 – no Internet connection - was again excluded from this analysis) and the results are shown in Table 4.2.5. The ANOVA showed that there were significant differences in perceived benefits and number of Internet uses. Post-hoc tests using LSD indicated that the significant differences in perceived benefits were between levels one (Internet connection without website) and four (business website with online catalogue), levels one and five (all transactions/payments can be done on

website), levels two (basic website without permanent Internet connection) and four, and levels two and five. For the number of use of the Internet, the differences laid under level one and three, one and four, and one and five as well as level two and five (Post-hoc using Scheffe).

Table 4.2.5 Summary of ANOVA Analyses for Levels of Internet Support Retail Sample

	1*	2	3	4	5	F	df	p
Perceived benefits	3.45	3.44	3.70	3.85	4.02	2.88	116	**p<0.05**
	(0.58)	(0.72)	(0.63)	(0.51)	(0.49)			
Organisational readiness	2.85	3.14	3.17	2.98	3.08	0.72	116	ns
	(0.84)	(0.71)	(0.69)	(0.78)	(0.69)			
External pressure	2.45	2.50	2.95	2.77	2.98	1.30	116	ns
	(0.77)	(0.73)	(0.76)	(0.81)	(0.51)			
Number of uses of Internet	4.59	6.00	7.06	8.18	9.30	11.53	124	**p<0.001**
	(1.87)	(3.09)	(2.38)	(2.27)	(1.57)			
Organisational readiness	2.73	2.70	2.93	2.40	2.20	2.21	124	ns
(Non IT Resources)	(1.00)	(0.79)	(0.95)	(0.96)	(0.86)			
Organisational readiness	2.95	3.43	3.33	3.36	3.67	1.45	124	ns
(IT Resources)	(0.89)	(0.72)	(0.81)	(0.92)	(0.72)			

* 1 – Internet connection without website
2 – Webpage without permanent Internet connection
3 – Webpage with permanent Internet connection
4 – Webpage with online catalogue
5 – All transactions and payments through website

4.2.2 Business Type

For business type (legal structure), there were significant differences for perceived benefits and number of uses of the Internet. Because of the small number of responses for business type 5 (other), this data was excluded from the ANOVA analysis. Post-hoc tests with LSD showed that the differences were between types one (sole proprietor) and four (limited enterprise), and between types two (partnership) and four. For the number of uses of the Internet the differences were found between types one and three, types one and four, and types two and four. Table 4.2.6 gives a summary of the ANOVA analyses by business type.

Table 4.2.6 Summary of ANOVA Analyses for Business Type – Retail Sample

	1	2	3	4*	F	df	p
Perceived benefits	3.41	3.30	3.66	3.79	3.00	117	**p<0.05**
	(0.64)	(0.93)	(0.36)	(0.57)			
Organisational readiness	3.22	3.05	3.48	2.99	1.30	117	ns
	(0.80)	(1.13)	(0.58)	(0.72)			
External pressure	2.71	2.84	3.31	2.70	1.57	117	ns
	(0.63)	(0.98)	(0.69)	(0.77)			
Number of uses of Internet	4.71	5.00	7.50	7.53	6.01	125	**p<0.01**
	(2.79)	(2.56)	(1.85)	(2.60)			
Organisational readiness	3.00	2.81	2.81	2.58	0.78	125	ns
(Non-IT resources)	(0.92)	(1.53)	(0.84)	(0.95)			
Organisational readiness	3.38	3.21	3.92	3.26	1.53	125	ns
(IT resources)	(0.89)	(0.94)	(0.58)	(0.86)			

* 1 – Sole proprietor
2 – Partnership
3 – Small corporation
4 – Limited enterprise

4.2.3 Business Size

For the analyses of business size, the data were combined into two groups, group one had between 1 and 20 FTEs and group two had between 21 and 200 FTEs. The results of the t-tests showed that there was a significant difference in the number of uses of the Internet, with the larger company having the higher number of uses. All the other variables showed no significant differences. Table 4.2.7 gives a summary of the result for the t-test analyses.

Table 4.2.7 Summary of t-Test Analyses for Business Size – Retail Sample

	1 to 20 (M, sd, N)	21 to 200 (M, sd, N)	t-value	df	p
Perceived benefits	3.68 (0.62) (106)	3.85 (0.50) (19)	1.13	123	ns
Organisational readiness	3.02 (0.74) (108)	3.19 (0.83) (19)	0.92	125	ns
External pressure	2.72 (0.76) (107)	2.96 (0.79) (19)	1.26	124	ns
Number of uses of Internet	6.76 (2.74) (111)	8.89 (1.94) (19)	3.26	128	**p<0.01**
Organisational readiness (IT Resources)	3.29 (0.84) (108)	3.46 (0.94) (19)	0.78	125	ns
Organisational readiness (Non-IT Resources)	2.62 (1.00) (111)	2.79 (0.89) (19)	0.70	128	ns

4.2.4 International Business

A series of t-tests were conducted to determine if there were any significant differences between international retail SMEs (defined as either had international customers or were trading in overseas countries) and non-international retail SMEs (see Table 4.2.8). There were significant differences found between the means for perceived benefits, number of uses of the Internet, and organisational readiness (non-IT resources). For all variables with significant differences, except for organisational readiness (non-IT resources), higher scores were associated with international business.

Table 4.2.8 Summary of t-Test Analyses for International Business Retail Sample

	No (M, sd, N)	Yes (M, sd, N)	t-value	df	p
Perceived benefits	3.65 (0.59) (97)	3.97 (0.65) (23)	2.27	118	**p<0.05**
Organisational readiness	3.07 (0.75) (100)	2.97 (0.78) (22)	0.54	120	ns
External pressure	2.71 (0.75) (99)	2.91 (0.84) (22)	1.08	119	ns
Number of uses of Internet	6.75 (2.74) (102)	8.52 (2.33) (23)	2.87	123	**p<0.01**
Organisational readiness (IT Resources)	3.30 (0.84) (100)	3.42 (0.94) (22)	0.61	120	ns
Organisational readiness (Non-IT Resources)	2.74 (1.00) (102)	2.26 (0.82) (23)	2.14	123	**p<0.05**

4.2.5 Family Business

An investigation of retail SMEs with full-time employees from one family using t-tests, found no significant differences in terms of perceived benefits, organisational readiness, external pressure, and number of uses of the Internet.

4.2.6 Year Established Internet Presence

The sample of retail SMEs were divided into two groups – those who had an Internet presence prior to 2000, and those who established an Internet presence in 2000 or after. The t-tests showed that statistically significant differences were found for the number of Internet uses (see Table 4.2.9). A higher level of Internet use was associated with businesses with an earlier Internet presence.

Table 4.2.9 Summary of t-Test Analyses for Year Established Internet Presence Retail Sample

	Prior to 2000 (M, sd, N)	2000 & after (M, sd, N)	t-value	df	p
Perceived benefits	3.78 (0.60) (73)	3.61 (0.60) (52)	1.55	123	ns
Organisational readiness	3.05 (0.72) (75)	3.04 (0.80) (52)	0.05	125	ns
External pressure	2.84 (0.77) (74)	2.64 (0.76) (52)	1.43	124	ns
Number of uses of Internet	7.64 (2.71) (75)	6.29 (2.61) (55)	2.85	128	**p<0.01**
Organisational readiness (IT Resources)	3.36 (0.84) (75)	3.24 (0.88) (52)	0.78	125	ns
Organisational readiness (Non-IT Resources)	2.57 (0.95) (75)	2.75 (1.04) (55)	1.02	128	ns

4.2.7 Analysis of Comments Concerning Internet Adoption for Retail SMEs

There were twenty-eight comments collected from one hundred and thirty usable returned survey forms filled out by retail SME owners/managers, and this section presents the themes of the comments received. The comments were grouped into positive, negative and neutral comments for ease of analysis. The approximate number for each group was eleven positive, eleven negative and six neutral comments. Some of the positive comments were:

- Ease of access and use with reliability is the key to our use.
- Advertising on the Web leads to a huge growth in visits to the website.

- It is a great way to create income from home, with flexible working hours and without compromising parental priorities.
- The Internet has changed the face of companies like us. Staff researching products online is very efficient.
- It is an essential tool for businesses to communicate with their customers and suppliers now. It is the way of the future.

Some of the negative comments were:

- Internet is slow, frustrating and difficult to get any connection at peak times. Ordering from suppliers through fax/phone is faster than via the web.
- Size of Internet presence depends on the budget. Internet connection cost is too high.
- Most of the products need to be sold face to face and some online trading companies have damaged our industry.
- The Internet does not generate income if in a small owner operated business and the owner has no time to sit in front of the computer all day.
- There is a risk of hacking and it can be an impersonal way of communication. Computer cannot build relationship with customer. One-to-one is more effective.
- Information is still hard to access on the web, e.g. website design and implementation for integrating online payment facilities with website.

Some of the neutral comments were:

- Internet has been a thrust as big pressure was imposed by governmental agencies, but paying wages using online banking facilities is very efficient.

- Adoption of the Internet really depends on the nature of business.
- Internet is useless for selling, but websites are useful for brand support and awareness

- Reason to adopt the Internet is only to keep it up to date as most businesses have it so we do not want to be left behind.

4.3 Tourism Sector

Table 4.3.1 summarises the overall structure of the sample of tourism SMEs who participated in the study. This shows that approximately two thirds of the SMEs who participated were limited enterprises (61.4%), 12.8 percent indicated they were sole proprietors, 12.2 percent were partnerships, and 9.7 percent were small corporations. A small group indicated they were charitable organisations or non-for-profit organisations (4.0%).

Unlike retail SMEs, most tourism SMEs (72.3%) had an international focus (either having international customers or trading in overseas countries). A very small percentage of firms (2.4%) said they would become an international business in the near future. For the 237 firms that indicated they were international, the average number of years of international experience was 14.3 years.

For the year 2005, the majority of the firms (84.1%), indicated they had 20 or less full time employees (FTE), 13.7 percent had between 20 to 99 FTEs, and only a small percentage (2.1%) had FTE numbers greater than 99. The majority of firms (75.1%) had employees who were not family members. The earliest year in which tourism SMEs started to use the Internet as a business tool was 1988, with a median year of 1999.

For the level of Internet support offered by the business, about one third (32.4%) had a business webpage with a permanent Internet connection, and another one-third (31.8%) had a business webpage with an online catalogue. About one quarter (25.5%) indicated that all their business transactions and payments could be done through the webpage. This was about 18% more than the retail firms. A small percentage (5.8%) of firms reported that they had no business website but only an Internet connection, and less than five percent of the firms had a basic webpage but no permanent business Internet connection. The levels of Internet support offered by businesses are shown in Table 4.3.2.

Table 4.3.1 Sample Structure – Tourism Sample

	Frequency	Valid Percent
Business Type		
Limited enterprise	202	61.4%
Sole proprietor	42	12.8%
Partnership	40	12.2%
Small corporation	32	9.7%
Other	13	4.0%
International Business		
Yes	237	72.3%
No	91	27.7%
Full Time Employee Number		
1 to 20	276	84.1%
21 to 99	45	13.7%
100 to 200	7	2.1%
All Employees Are Family Members		
No	211	75.1%
Yes	70	24.9%

Table 4.3.2 Level of Internet Support – Tourism Sample

	Frequency	Valid Percent
No Internet connection	1	0.3%
Internet connection without website	19	5.8%
Basic website without permanent Internet connection	14	4.2%
Basic website with permanent Internet connection	107	32.4%
Business website with online catalogue	105	31.8%
All transactions/payments can be done on website	84	25.5%

Frequencies of Internet use are shown in Table 4.3.3 below. The results show that 98.2 percent of the firms were using the Internet as a way of external communication by E-mail, 90.6 percent were offering information to consumers on the website, and 86.4 percent were using the Internet mainly for random information searching. Many of the firms were obtaining information from suppliers (80.6%), receiving orders and bookings from their customers (82.7%), and searching for webpage addresses (74.5%). Over 70 percent of the firms were conducting product and market research, 59.1 percent had contact with government agencies, and 32.4 percent were employing the Internet as an internal communications tool (Intranet). Around one half indicated they were using the Internet to send purchase orders to suppliers, and offering online payment options to their customers. Surprisingly, 26 firms (7.9%) reported using the Internet to make voice and/or video conferencing with their business partners via the Internet.

Table 4.3.3 Types of Internet Usage – Tourism Sample

	Frequency	Valid Percent
External communication / E-mail	324	98.2%
Offering information to consumers on website	299	90.6%
Randomly looking for information	285	86.4%
Receiving orders from customers	273	82.7%
Obtaining information from suppliers	266	80.6%
Searching for webpage addresses	246	74.5%
Product and market research	235	71.2%
Contact with government agencies	195	59.1%
Offering online payment options	164	49.7%
Sending purchase orders to suppliers	160	48.5%
Internal communication / Intranet	107	32.4%
Placing job vacancies	92	27.9%
Voice / Video conferencing	26	7.9%

Table 4.3.4 Number of Internet Uses – Tourism Sample

	Frequency	Valid Percent
1	1	0.3%
2	7	2.1%
3	6	1.8%
4	17	5.2%
5	23	7.0%
6	24	7.3%
7	43	13.0%
8	47	14.2%
9	56	17.0%
10	55	16.7%
11	34	10.3%
12	14	4.2%
13	3	0.9%

Table 4.3.4 summaries the number of Internet uses for the tourism SMEs. The average number of Internet uses by tourism SMEs was 8.10. It is interesting to note that there was one firm who did not use the Internet for business purposes in any form and three firms used every Internet activity specified in the survey.

4.3.1 Levels of Internet Support

A series of one-way analysis of variance (ANOVA) tests were undertaken on the levels of Internet support offered by tourism SMEs (Level 0 – no Internet connection - was again excluded from this analysis) and the results are shown in Table 4.3.5. The one-way ANOVA showed significant differences in perceived benefits, number of uses of Internet, and organisational readiness (non IT resources).

Post-hoc tests using LSD showed that the differences in perceived benefits were found between levels one (Internet connection without website) and five (all transactions/payments can be done on website), and levels two (basic website without permanent Internet connection) and five. For number of uses of the Internet, differences were found between levels one and three (webpage with permanent Internet connection), levels four (business website with online catalogue) and five, levels five and two, and levels three and four. Significant differences for organisational readiness (non-IT resources) were found between levels one and two, and levels three and five.

Table 4.3.5 Summary of ANOVA Analyses for Levels of Internet Support Tourism Sample

	1*	2	3	4	5	F	df	p
Perceived benefits	3.94	3.91	4.17	4.13	4.33	3.77	305	**p<0.01**
	(0.59)	(0.45)	(0.53)	(0.63)	(0.44)			
Organisational readiness	3.39	2.82	2.91	3.09	3.11	1.83	305	ns
	(0.90)	(0.91)	(0.70)	(0.75)	(0.65)			
External pressure	2.86	2.94	3.03	3.22	3.22	1.90	305	ns
	(0.63)	(0.54)	(0.73)	(0.74)	(0.72)			
Number of uses of Internet	6.11	7.07	7.67	8.17	9.25	9.80	315	**p<0.001**
	(2.35)	(1.73)	(2.42)	(2.35)	(2.02)			
Organisational readiness	3.11	2.29	2.37	2.64	2.42	2.94	315	**p<0.05**
(Non IT Resources)	(1.29)	(1.20)	(1.00)	(1.13)	(1.01)			
Organisational readiness	3.58	3.22	3.26	3.37	3.59	2.16	315	ns
(IT Resources)	(0.88)	(1.06)	(0.80)	(0.88)	(0.74)			

* 1 – Internet connection without website
2 – Webpage without permanent Internet connection
3 – Webpage with permanent Internet connection
4 – Webpage with online catalogue
5 – All transactions and payments through website

4.3.2 Business Type

For business type (legal structure), there were significant differences for number of uses of the Internet. Because of the small number of responses for business type 5 (other), this data was excluded from the ANOVA analysis. The results are shown in Table 4.3.6.

Table 4.3.6 Summary of ANOVA Analyses for Business Type – Tourism Sample

	1*	2	3	4	F	df	p
Perceived benefits	4.24	4.13	4.04	4.18	0.79	292	ns
	(0.64)	(0.69)	(0.51)	(0.53)			
Organisational readiness	3.11	2.97	3.15	3.00	0.47	292	ns
	(0.74)	(0.71)	(0.78)	(0.73)			
External pressure	3.13	3.04	3.00	3.13	0.44	292	ns
	(0.71)	(0.72)	(0.71)	(0.72)			
Number of uses of Internet	7.00	6.68	7.81	8.61	11.57	302	**p<0.001**
	(2.82)	(2.61)	(2.16)	(2.17)			
Organisational readiness	2.67	2.40	2.78	2.43	2.00	302	ns
(Non IT Resources)	(1.11)	(1.05)	(1.17)	(1.08)			
Organisational readiness	3.38	3.34	3.34	3.39	0.05	302	ns
(IT Resources)	(0.89)	(0.98)	(0.80)	(0.80)			

* 1 – Sole proprietor
2 – Partnership
3 – Small corporation
4 – Limited enterprise

4.3.3 Business Size

For business size, independent sample t-tests were conducted for the two groups of firm size – group one had between 1 to 20 FTEs and group two had between 21 and 200 FTEs. The results presented in Table 4.3.7 showed that there were significant for organisational readiness, number of uses of the Internet, and organisational readiness (non IT resources). For all three variables, larger firm size was associated with higher scores.

Table 4.3.7 Summary of t-Test Analyses for Business Size – Tourism Sample

	1 to 20 (M, sd, N)	21 to 200 (M, sd, N)	t-value	df	p
Perceived benefits	4.18 (0.57) (266)	4.11 (0.50) (52)	0.81	316	ns
Organisational readiness	3.00 (0.73) (264)	3.26 (0.69) (51)	2.30	313	**p<0.05**
External pressure	3.09 (0.72) (270)	3.26 (0.74) (51)	1.53	319	ns
Number of uses of Internet	7.91 (2.46) (276)	9.10 (2.06) (52)	3.28	326	**p<0.01**
Organisational readiness (IT Resources)	3.35 (0.84) (265)	3.58 (0.77) (51)	1.75	314	ns
Organisational readiness (Non-IT Resources)	2.46 (1.09) (275)	2.81 (1.05) (51)	2.15	325	**p<0.05**

4.3.4 International Business

A series of t-tests were conducted to determine if there were any significant differences between international retail SMEs (defined as either had international customers or were trading in overseas countries) and non-international retail SMEs (see Table 4.3.8). There were significant differences found for perceived benefits, external pressure, and number of uses of the Internet for tourism SMEs. For all variables with significant differences, higher scores were associated with international business.

Table 4.3.8 Summary of t-Test Analyses for International Business Tourism Sample

	No (M, sd, N)	Yes (M, sd, N)	t-value	df	p
Perceived benefits	4.06 (0.55) (80)	4.23 (0.55) (230)	2.35	308	**p<0.05**
Organisational readiness	3.11 (0.71) (81)	3.01 (0.74) (227)	1.03	306	ns
External pressure	2.90 (0.64) (81)	3.21 (0.72) (232)	3.41	311	**p<0.01**
Number of uses of Internet	7.14 (2.60) (83)	8.53 (2.21) (237)	4.70	318	**p<0.001**
Organisational readiness (IT Resources)	3.37 (0.85) (81)	3.39 (0.83) (228)	0.19	307	ns
Organisational readiness (Non-IT Resources)	2.69 (1.06) (83)	2.44 (1.09) (236)	1.86	317	ns

4.3.5 Family Business

An investigation of tourism SMEs with full-time employees from one family using t-tests was conducted. The only significant difference was found in the number of uses of the Internet, where the family business had a lower number of uses. Table 4.3.9 presents a summary of the t-test results.

Table 4.3.9 Summary of t-Test Analyses for Family Business – Tourism Sample

	No (M, sd, N)	Yes (M, sd, N)	t-value	df	p
Perceived benefits	4.16 (0.57) (205)	4.18 (0.52) (67)	0.27	270	ns
Organisational readiness	3.04 (0.76) (204)	2.99 (0.69) (65)	0.45	267	ns
External pressure	3.08 (0.73) (210)	3.10 (0.67) (67)	0.25	275	ns
Number of uses of Internet	8.18 (2.32) (211)	7.04 (2.56) (237)	3.46	279	**p<0.01**
Organisational readiness (IT Resources)	3.40 (0.84) (205)	3.28 (0.87) (65)	1.04	268	ns
Organisational readiness (Non-IT Resources)	2.48 (1.11) (210)	2.51 (1.04) (70)	0.16	278	ns

4.3.6 Year Established Internet Presence

The sample of tourism SMEs were divided into two groups – those who had an Internet presence prior to 2000, and those who established an Internet presence in 2000 or after. The t-tests showed that statistically significant differences were found for external pressure and the number of Internet uses (see Table 4.3.10). For both variables with significant differences, higher scores were associated with businesses with an earlier Internet presence.

Table 4.3.10 Summary of t-Test Analyses for Year Established Internet Presence Tourism Sample

	Prior to 2000 (M, sd, N)	2000 & after (M, sd, N)	t-value	df	p
Perceived benefits	4.21 (0.53) (191)	4.12 (0.60) (129)	1.39	318	ns
Organisational readiness	3.06 (0.71) (187)	3.02 (0.76) (130)	0.45	315	ns
External pressure	3.20 (0.69) (192)	3.02 (0.73) (131)	1.95	321	**p<0.05**
Number of uses of Internet	8.48 (2.26) (197)	7.53 (2.57) (133)	3.56	328	**p<0.001**
Organisational readiness (IT Resources)	3.42 (0.81) (188)	3.36 (0.86) (130)	0.69	316	ns
Organisational readiness (Non-IT Resources)	2.52 (1.07) (196)	2.50 (1.12) (133)	0.20	327	ns

4.3.7 Analysis of Comments Concerning Internet Adoption for Tourism SMEs

There were eighty-six comments out of three hundred and thirty returned usable survey forms from tourism SME owners/managers, and the following presents some of the comments received. They are grouped into positive, negative and neutral comments. The approximate number of each group was forty-seven positive, twenty-one negative and eighteen neutral comments. Some of the positive comments were:

- Internet is great and very essential for all sized businesses. Benefits outweigh costs, particularly when dealing with international customers.

- Internet is helpful in global markets especially as market tends to be independent and Internet savvy. Easy method to advertise and promote worldwide.
- Internet has built up customer base rapidly.
- Internet saves time, money and customers.
- Not IT-savvy people but willing to use expertise of professional.
- Internet helps to level the playing field for smaller companies and makes the world available to New Zealand.

Some of the common themes appeared in the negative comments were:

- If broadband was more economic, the Internet would be adopted more readily.
- Broadband connection is very expensive due to telecommunication monopoly in this market in New Zealand. TIANZ should bring this up and take a firm stand on opening up this market to lower the cost of broadband connection before discussing its benefits. Lack of affordable fast Internet is an extreme disadvantage to small tourism businesses. Cost far outweighs the benefit to very small businesses.
- The Internet is useless to gathering sales because no one knows where you are because search engine will not get you on the top five listings just like that.
- Email booking/online booking is a hassle and more complicated than direct phone calls.
- IT support for business network, decisions on software purchases and website development present significant cost/time problems as well as quality challenges.
- Human relationship with customers/employees may be weakened by using the Internet. Prefer to use phone as Internet does not allow for personality.
- The tourism industry is well behind IT adoption compared to other industries. Mostly due to the fact that most are owner operators with very little IT capability. Even TIANZ did not understand the issue on the recent national conference in November 2004.

- Not enough is known about ‘trafficology’ and web statistics, hence there are lots of businesses with website that ‘do not work’ for them.
- Website is just an ‘online brochure’ and email can produce lots of inquiries but fax’s and phones produce sales.

Furthermore, there were some neutral comments, such as:

- The Internet is a great tool to communicate, but this can be mistaken for the only way to communicate, which in turn can affect accuracy, timeliness and professionalism.
- Lack of IT knowledge should not be a factor as outsourcing technical assistance in developing and maintaining an effective website is very affordable these days. Quality of connection and speed are a major limiting issue for most rural-based operators.
- Although Internet is very convenient for businesses, many older customers do not trust online shopping due to security issues.
- Some businesses are restricted to use this medium by small size in terms of marketing budget. Prefer to have programmes that teach how to market own website, such as search engine and site optimisation.
- Website allows potential clients to access full information from their home/business, but it is difficult to choose web-based advertising companies because lack of information about which is cost effective.

4.4 Comparisons between Retail and Tourism Sectors

In this section, a comparison is made between the retail and tourism sectors. As expected, there were some similarities and some differences. A simple comparison of means showing the relative importance of each adoption factor for the overall sample and for the two industry sectors is presented initially. The sample structure for both sectors is then compared, followed by a statistical comparison of the mean scores on the dependent variables for the two sectors. Finally, a discussion of similarities is followed by a discussion of differences.

When we consider the factors affecting the adoption of Internet technology, Table 4.4.1 shows the mean scores for the overall sample, the retail sample, and the tourism sample. Higher mean scores indicate a higher level of agreement with the variable (interpreted here as a higher level of importance). For the overall sample and the two industry sectors, perceived benefits had the highest mean compared to overall organisational readiness and external pressure. This suggests that perceived benefits of the Internet have more impact on the decision for Internet adoption than either of the other adoption factors. For all three groupings, the IT resources component of organisational readiness was the second highest factor. For the retail sector, overall organisational readiness had the third highest score, while for the tourism sector, external pressure had the third highest score.

Table 4.4.1 Mean Scores of Internet Adoption Factors

	Whole Sample		Retail		Tourism	
	Mean	*(sd)*	*Mean*	*(sd)*	*Mean*	*(sd)*
Perceived benefits	4.04	(0.60)	3.71	(0.60)	4.17	(0.56)
Organisational readiness	3.05	(0.74)	3.04	(0.75)	3.05	(0.73)
IT Resources	3.37	(0.84)	3.31	(0.85)	3.40	(0.83)
Non-IT Resources	2.55	(1.06)	2.64	(0.99)	2.51	(1.09)
External pressure	3.02	(0.75)	2.76	(0.77)	3.12	(0.72)
Number of Internet uses	7.81	(2.56)	7.07	(2.74)	8.10	(2.43)

Table 4.4.2 presents a comparison of the sample structure for both industry sectors. While similar distributions of business type were found for both sectors, the retail sector had a higher number of Limited Enterprise business types than the tourism sector. The tourism sector had a higher number of employees who were family members. The most striking difference however, was in the international focus of the firm, with 72.3 percent of the tourism sector compared to only 17.7 percent of the retail sector either having international customers or trading in overseas countries.

Table 4.4.2 Sample Structure Comparison

	Retail	Tourism
Business Type		
Limited Enterprise	76.2%	61.4%
Sole Proprietor	10.8%	12.8%
Partnership	6.2%	12.2%
Small Corporation	6.2%	9.7%
Other	0.8%	4.0%
International Business		
Yes	17.7%	72.3%
No	82.3%	27.7%
Full Time Employee Number		
1 to 20	85.4%	84.1%
21 to 99	11.5%	13.7%
100 to 200	3.1%	2.1%
All Employees Are Family Members		
No	92.6%	75.1%
Yes	7.4%	24.9%

4.4.1 Statistical Comparisons

A series of t-test analyses were conducted comparing the retail and tourism industry sectors. The results are shown in Table 4.4.3 below. Statistical significant differences were found for perceived benefits, external pressure, and number of Internet uses. For all significant differences, the tourism sector had higher levels of perceived benefits, external pressure, and number of uses for the Internet than the retail sector.

Table 4.4.3 Summary of t-Test Analyses for Industry Type – Whole Sample

	Retail (M, sd, N)	Tourism (M, sd, N)	t-value	df	p
Perceived benefits	3.71 (0.60) (125)	4.17 (0.56) (320)	7.68	443	**p<0.001**
Organisational readiness	3.04 (0.75) (127)	3.05 (0.73) (317)	0.05	442	ns
External pressure	2.76 (0.77) (126)	3.12 (0.72) (323)	4.77	447	**p<0.001**
Number of uses of Internet	7.07 (2.74) (130)	8.10 (2.43) (330)	3.94	458	**p<0.001**
Organisational readiness (IT Resources)	3.31 (0.85) (127)	3.40 (0.83) (318)	0.91	443	ns
Organisational readiness (Non-IT Resources)	2.64 (0.99) (130)	2.51 (1.09) (329)	1.20	457	ns

4.4.2 Similarities

- In both industries, over 80 percent of the SMEs studied had no more than 20 full-time employees.
- In both industries, limited enterprises were the most frequent legal structure, followed by sole proprietor, partnerships and small corporations, in descending order.
- Perceived benefits ranked the highest factor compared to organisational readiness and external pressure in both industries. As higher mean scores indicate a higher level of agreement with the statement (i.e. higher level of importance), perceived benefits was

the most important factor affecting Internet adoption in both industries.

- The means of organisational readiness were very close across both industries.
- The year that businesses first started to use the Internet was between 1988 and 1990 in both industries. Both had a median year of 1999.
- In relation to how SMEs were using the Internet, more than 93 percent of the retail and tourism firms were using the Internet for external communication via E-mails.
- More than 84 percent of the retail and tourism firms were using the Internet for random information search.
- Approximately 80 percent of the SMEs in retail and tourism industries were using the Internet to obtain information from suppliers.
- Both industries had less than 40 percent of the firms using the Internet as a method of internal communication.
- Firms in both industries shared similar percentages in sending purchase orders to suppliers.
- The majority of the firms (more than 90%) in both industries were not using the Internet to carry out voice or video conferencing, and less than 30 percent were placing job vacancies online.
- In both industries, there were significant differences in the number of Internet uses when analysed by business size.
- There were significant differences in perceived benefits and number of Internet uses across levels of Internet support and international business in both industries.
- Both industries showed significant difference in the number of Internet uses when analysed by the type of business.

4.4.3 Differences

- For perceived benefits, the tourism industry mean had a higher value of 4.17, compared to 3.71 for the retail industry. This difference was found to be statistically significant.
- For external pressure, the tourism industry mean was again higher with a value of 3.12 compared to 2.76 in the retail industry. This difference was found to be statistically significant.
- Almost 40% of retail SMEs had a Web page with an online catalogue while just over 30 percent of tourism SMEs had the same level of Internet support.
- Just over a quarter of the tourism firms were capable of offering full transactions and payments through their websites, however, only 7.7 percent of the retail firms were ready to offer this level of Internet support to their customers.
- More retail firms just had a basic Internet connection without a business website (16.9%) compared to tourism firms (5.8%).
- Over 20 percent of the tourism firms reported that all employees of the business were from the same family, while only about 7 percent of the retail firms reported this.
- Only about 18 percent of the retail firms reported that they were an international business (either serving international customers or trading overseas). In contrast, more than 70 percent of the tourism firms indicated that they were an international business.
- About 75 percent of the tourism firms and 60 percent of the retail firms were using the Internet to search for webpage addresses.
- Over 90 percent of the tourism firms and about 74 percent of the retail firms were offering information to the consumers through their websites.

- More tourism SMEs (about 60%) had contact with government agencies via the Internet than retail SMEs (about 40%).
- Tourism firms showed a greater tendency (over 70%) to conduct product and market research on the web as compared to the retail firms (about 55%).
- More than 82 percent of the tourism firms and about 75 percent of the retail firms were receiving orders from their customers through the Internet.
- More tourism firms (about 50%) were offering online payment options compared to retail firms (about 32%).
- The average number of Internet uses for retail firms was 7.07, which was lower than the tourism mean (8.10).
- The results of the t-test analyses presented in Table 4.4.3 showed that there were significant differences in perceived benefits, external pressure, and number of Internet uses between the retail and tourism industries.
- For levels of Internet support, there was a significant difference for non-IT related organisational readiness (i.e. business size and financial resources) in the tourism industry but not in the retail industry. This is probably because more tourism SMEs are owner-operated businesses and thus business size and financial resources have more influence on the levels of Internet support the business can offer.
- There was no significant difference found in the tourism industry in perceived benefits with respect to business type, yet perceived benefits was significantly different across the types of business in the retail sector.

- In terms of business size in the retail industry, the only significant difference found was in the number of Internet uses. However, in the tourism industry there were significant differences found in organisational readiness and non-IT related organisational readiness. This indicates that business size has more impact on organisational readiness, particularly non-IT related organisational resources in the tourism SMEs.
- In the retail industry, there was no significant difference found for in external pressure in relation to international business, but there was a different result for the tourism industry. The tourism industry perceived more pressure than the retail industry in terms of being internationally focused.
- There was no significant difference found in the variables in relation to family business in the retail industry. However, in the tourism industry a significant difference was found in the number of Internet uses in relation to family business. This illustrated that whether or not the business is family-owned had more impact on the number of Internet uses in tourism SMEs rather than in retail SMEs.

4.5 Summary

This chapter reported on the analysis of data from a total of 460 returned questionnaires from small- and medium-sized enterprises in the retail and tourism industries in New Zealand. The analysis presented in this chapter began with the whole sample and was then followed by separate analyses of the retail industry and the tourism industry. A comparison of the two industries on a number of selected variables was then undertaken. For the overall sample and for the two sub-samples, the analysis started with a description of the organisational structure, including firm size, status of international trading and type of business. This was followed by an analysis of Internet sophistication within the firm, covering level of support and type and number of Internet uses.

As outlined in chapters two and three, five measures for comparing the firms within and across industry sectors were used – the level of perceived benefits, the level of organisational readiness (measured by an overall score and two subscores covering IT resources and non-IT resources), and the level of external pressure. A simple measure of Internet involvement was used - the number of uses the firm makes of various Internet activities. For those analyses comparing more than two groups, such as levels of Internet support and type of business, an ANOVA test was used to determine statistical significance. For those analyses comparing only two groups, for example, business size, international business, family business, and year of establishing Internet presence, t-tests were used to determine significant differences.

In sum, the result showed that perceived benefits of the Internet exerted a stronger impact than either organisational readiness or external pressure on the adoption decision in both the retail and tourism industries. The least important factor on the adoption decision for the retail industry was external pressure, and for the tourism industry organisational readiness. Across different levels of Internet sophistication and international business status,

there were significant differences in perceived benefits of the Internet in both industries. In terms of the size of the firms, there were no significant differences in the adoption factors in either industry. However, significant differences existed in organisational readiness and external pressure in terms of levels of Internet sophistication and international business status respectively in the tourism industry.

The final section of this chapter presents a summary of the results of the hypothesis testing for the whole sample, the retail industry sample, and the tourism industry sample, as well as results for the hypotheses relating to a comparison between the industries. The implications of these findings will be discussed in the next chapter.

4.6 Summary of Results for Hypotheses Tests

4.6.1 Whole Sample

Levels of Internet Support

1.1	Organisations with increasing levels of Internet support will report increasing levels of perceived benefits.	**SUPPORTED**
1.2	Organisations with increasing levels of Internet support will report increasing levels of organisational readiness.	**NOT SUPPORTED**
1.3	Organisations with increasing levels of Internet support will report increasing levels of external pressure.	**SUPPORTED**
1.4	Organisations with increasing levels of Internet support will report an increasing number of Internet uses.	**SUPPORTED**

Business Type

2.1	Organisations with different legal structures will report different levels of perceived benefits.	**NOT SUPPORTED**
2.2	Organisations with different legal structures will report different levels of organisational readiness.	**NOT SUPPORTED**
2.3	Organisations with different legal structures will report different levels of external pressure.	**NOT SUPPORTED**
2.4	Organisations with different legal structures will report different numbers of Internet uses.	**SUPPORTED**

Business Size

3.1	Large organizations will report higher levels of perceived benefits compared to small organizations	**NOT SUPPORTED**
3.2	Large organizations will report higher levels of organisational readiness compared to small organizations.	**SUPPORTED**
3.3	Large organizations will report higher levels of external pressure compared to small organizations.	**SUPPORTED**
3.4	Large organizations will report an increased number of Internet uses compared to small organizations.	**SUPPORTED**

International Business

4.1	Organizations engaged in international business will report higher levels of perceived benefits compared to organizations not engaged in international business.	**SUPPORTED**
4.2	Organizations engaged in international business will report higher levels of organisational readiness compared to organizations not engaged in international business.	**NOT SUPPORTED**
4.3	Organizations engaged in international business will report higher levels of external pressure compared	**SUPPORTED**

to organizations not engaged in international business.

4.4 Organizations engaged in international business will report an increased number of Internet uses compared to organizations not engaged in international business. **SUPPORTED**

Family Business

5.1 Organizations that are family businesses will report different levels of perceived benefits compared to organizations that are not family businesses. **NOT SUPPORTED**

5.2 Organizations that are family businesses will report different levels of organisational readiness compared to organizations that are not family businesses. **NOT SUPPORTED**

5.3 Organizations that are family businesses will report different levels of external pressure compared to organizations that are not family businesses. **NOT SUPPORTED**

5.4 Organizations that are family businesses will report different numbers of Internet uses compared to organizations that are not family businesses. **SUPPORTED**

Year Established on Internet

6.1 Organizations that established an Internet presence prior to 2000 will report higher levels of *perceived benefits* compared to organizations that established an Internet presence during or after 2000. **SUPPORTED**

6.2 Organizations that established an Internet presence prior to 2000 will report higher levels of *organisational readiness* compared to organizations that established an Internet presence during or after 2000. **NOT SUPPORTED**

6.3 Organizations that established an Internet presence prior to 2000 will report higher levels of *external pressure* compared to organizations that established an Internet presence during or after 2000. **SUPPORTED**

6.4 Organizations that established an Internet presence prior to 2000 will report an increased *number of Internet uses* compared to organizations that established an Internet presence during or after 2000. **SUPPORTED**

4.6.2 Retail Sample

Levels of Internet Support

1.1 Organisations with increasing levels of Internet support **SUPPORTED**

	will report increasing levels of perceived benefits.	
1.2	Organisations with increasing levels of Internet support will report increasing levels of organisational readiness.	**NOT SUPPORTED**
1.3	Organisations with increasing levels of Internet support will report increasing levels of external pressure.	**NOT SUPPORTED**
1.4	Organisations with increasing levels of Internet support will report an increasing number of Internet uses.	**SUPPORTED**
Business Type		
2.1	Organisations with different legal structures will report different levels of perceived benefits.	**SUPPORTED**
2.2	Organisations with different legal structures will report different levels of organisational readiness.	**NOT SUPPORTED**
2.3	Organisations with different legal structures will report different levels of external pressure.	**NOT SUPPORTED**
2.4	Organisations with different legal structures will report different numbers of Internet uses.	**SUPPORTED**
Business Size		
3.1	Large organizations will report higher levels of perceived benefits compared to small organizations	**NOT SUPPORTED**
3.2	Large organizations will report higher levels of organisational readiness compared to small organizations.	**NOT SUPPORTED**
3.3	Large organizations will report higher levels of external pressure compared to small organizations.	**NOT SUPPORTED**
3.4	Large organizations will report an increased number of Internet uses compared to small organizations.	**SUPPORTED**
International Business		
4.1	Organizations engaged in international business will report higher levels of perceived benefits compared to organizations not engaged in international business.	**SUPPORTED**
4.2	Organizations engaged in international business will report higher levels of organisational readiness compared to organizations not engaged in international business.	**PARTIAL SUPPORT**
4.3	Organizations engaged in international business will report higher levels of external pressure compared to organizations not engaged in international business.	**NOT SUPPORTED**
4.4	Organizations engaged in international business will report an increased number of Internet uses compared to organizations not engaged in international business.	**SUPPORTED**

Family Business

5.1	Organizations that are family businesses will report different levels of perceived benefits compared to organizations that are not family businesses.	**NOT SUPPORTED**
5.2	Organizations that are family businesses will report different levels of organisational readiness compared to organizations that are not family businesses.	**NOT SUPPORTED**
5.3	Organizations that are family businesses will report different levels of external pressure compared to organizations that are not family businesses.	**NOT SUPPORTED**
5.4	Organizations that are family businesses will report different numbers of Internet uses compared to organizations that are not family businesses.	**NOT SUPPORTED**

Year Established on Internet

6.1	Organizations that established an Internet presence prior to 2000 will report higher levels of *perceived benefits* compared to organizations that established an Internet presence during or after 2000.	**NOT SUPPORTED**
6.2	Organizations that established an Internet presence prior to 2000 will report higher levels of *organisational readiness* compared to organizations that established an Internet presence during or after 2000.	**NOT SUPPORTED**
6.3	Organizations that established an Internet presence prior to 2000 will report higher levels of *external pressure* compared to organizations that established an Internet presence during or after 2000.	**NOT SUPPORTED**
6.4	Organizations that established an Internet presence prior to 2000 will report an increased *number of Internet uses* compared to organizations that established an Internet presence during or after 2000.	**SUPPORTED**

4.6.3 Tourism Sample

Levels of Internet Support

1.1	Organisations with increasing levels of Internet support will report increasing levels of perceived benefits.	**SUPPORTED**
1.2	Organisations with increasing levels of Internet support will report increasing levels of organisational readiness.	**PARTIAL SUPPORT**
1.3	Organisations with increasing levels of Internet support	**NOT SUPPORTED**

	will report increasing levels of external pressure.	
1.4	Organisations with increasing levels of Internet support will report an increasing number of Internet uses.	**SUPPORTED**
Business Type		
2.1	Organisations with different legal structures will report different levels of perceived benefits.	**NOT SUPPORTED**
2.2	Organisations with different legal structures will report different levels of organisational readiness.	**NOT SUPPORTED**
2.3	Organisations with different legal structures will report different levels of external pressure.	**NOT SUPPORTED**
2.4	Organisations with different legal structures will report different numbers of Internet uses.	**SUPPORTED**
Business Size		
3.1	Large organizations will report higher levels of perceived benefits compared to small organizations	**NOT SUPPORTED**
3.2	Large organizations will report higher levels of organisational readiness compared to small organizations.	**SUPPORTED**
3.3	Large organizations will report higher levels of external pressure compared to small organizations.	**NOT SUPPORTED**
3.4	Large organizations will report an increased number of Internet uses compared to small organizations.	**SUPPORTED**
International Business		
4.1	Organizations engaged in international business will report higher levels of perceived benefits compared to organizations not engaged in international business.	**SUPPORTED**
4.2	Organizations engaged in international business will report higher levels of organisational readiness compared to organizations not engaged in international business.	**NOT SUPPORTED**
4.3	Organizations engaged in international business will report higher levels of external pressure compared to organizations not engaged in international business.	**SUPPORTED**
4.4	Organizations engaged in international business will report an increased number of Internet uses compared to organizations not engaged in international business.	**SUPPORTED**
Family Business		
5.1	Organizations that are family businesses will report different levels of perceived benefits compared to organizations that are not family businesses.	**NOT SUPPORTED**

5.2 Organizations that are family businesses will report different levels of organisational readiness compared to organizations that are not family businesses. **NOT SUPPORTED**

5.3 Organizations that are family businesses will report different levels of external pressure compared to organizations that are not family businesses. **NOT SUPPORTED**

5.4 Organizations that are family businesses will report different numbers of Internet uses compared to organizations that are not family businesses. **SUPPORTED**

Year Established on Internet

6.1 Organizations that established an Internet presence prior to 2000 will report higher levels of *perceived benefits* compared to organizations that established an Internet presence during or after 2000. **NOT SUPPORTED**

6.2 Organizations that established an Internet presence prior to 2000 will report higher levels of *organisational readiness* compared to organizations that established an Internet presence during or after 2000. **NOT SUPPORTED**

6.3 Organizations that established an Internet presence prior to 2000 will report higher levels of *external pressure* compared to organizations that established an Internet presence during or after 2000. **SUPPORTED**

6.4 Organizations that established an Internet presence prior to 2000 will report an increased *number of Internet uses* compared to organizations that established an Internet presence during or after 2000. **SUPPORTED**

4.6.4 Comparison of Industry Sectors

C.1 Tourism industry organizations will report higher levels of perceived benefits compared to retail organizations. **SUPPORTED**

C.2 Tourism industry organizations will report higher levels of organisational readiness compared to retail organizations. **NOT SUPPORTED**

C.3 Tourism industry organizations will report higher levels of external pressure compared to retail organizations. **SUPPORTED**

C.4 Tourism industry organizations will report higher numbers of Internet uses compared to retail organizations. **SUPPORTED**

Chapter 5

Conclusions

This chapter begins with a discussion of the findings presented in chapter four, and then discusses the limitations identified in the processes used to establish these findings. The final section then discusses the implications and future research directions that may be of relevance to both academics and practitioners.

5.1 Discussion of Results

The research sought to investigate the following research questions:

> *What is the relationship between firm- and industry-specific factors, and the decision to adopt the Internet, among SMEs in the retail and tourism industries?*
>
> *What are the similarities and differences that exist with respect to the Internet adoption behaviour in the two industries mentioned above?*

In order to answer these questions, the following section summaries the findings from the data analysis completed and presented in chapter four.

In terms of the level of Internet support, the overall results showed that there was a positive relationship between the level of Internet support and perceived benefits, external

pressure, and the number of Internet uses. That is, the higher the level of Internet support within a firm, the higher the level of perceived benefits, external pressure, and the number of Internet uses a firm reported. The individual results obtained from the retail and tourism SMEs also indicated that the level of Internet support was positively related to the perceived benefits and the number of Internet uses. This result was consistent with previous studies that showed that organisations that possessed higher level of IT knowledge and capabilities were more likely to adopt and implement Internet-enabled capabilities (Iacovou et al., 1995; Lertwongsatien & Wongpinunwatana, 2003).

In terms of business type, the overall results showed that business type as a factor only had an impact on the number of Internet uses within firms. However, for the retail sample, business type not only had an impact on the number of Internet uses, but also on the level of perceived benefits. The tourism sample showed the same results as for the overall sample. While there were no significant relationships found between business type and the level of organisational readiness and external pressure, the study suggested that business type could impact on the level of perceived benefits and/or the number of Internet uses in organisations. These findings support an earlier study by Clark (2002), who suggested that the type of business operations influences the types of technology solutions that are appropriate and used.

In relation to business size, this factor had a significant influence on the level of organisational readiness, external pressure, and on the number of Internet uses within the overall sample. For retail SMEs, this factor only affected the number of Internet uses within firms, while it had a significant impact on organisational readiness and the number of Internet uses for the tourism sample. While there were differences between the retail and tourism samples in terms of business size, the overall results were consistent with previous studies, for example, Dholakia and Kshetri (2004), Lertwongsatien and Wongpinunwatana (2003), and Wang and Cheung (2004). However, the research outcome found in this study was contradictory to those of Grandon and Pearson (2004), Mehrtens et al. (2001), and Scupola (2003).

For businesses with an international focus, the overall results suggested that whether or not organisations engaged in international business had a significant impact on the level of perceived benefits, external pressure, and the number of Internet uses. That is, international businesses reported a higher level of perceived benefits, external pressure, and an increased number of Internet uses, compared to non-international firms. The result is consistent with Kula and Tatoglu's (2003) study. Both the retail and tourism firms showed very similar results to the overall sample in terms of international business, but it was found that international business had no effect on the level of external pressure, and only a partial impact on organisational readiness, in the retail SMEs.

Regarding the influence of a family-operated business, the findings showed that there was no impact on the Internet adoption factors for the overall, retail, and tourism samples. However, family business was found to be influential for the number of Internet uses, especially within tourism SMEs. The reason for that is probably due to the fact that a higher number of tourism businesses were owner-operated, and family members were more likely to influence the adoption decision. As the number of Internet uses was used in this study as a simple measure of the extent of Internet adoption, the findings of this study were consistent with those of Warren (2004).

In terms of years of Internet presence, the result obtained from all samples showed that the more experienced a firm was in terms of business presence on the Internet, the higher the level of perceived benefits, external pressure, and the greater the number of Internet uses reported. It is interesting to note that the overall finding did not support the relationship between years of Internet presence and organisational readiness. Looking at the retail firms, prior experience on the Internet did not have any impact on the Internet adoption factors, but it was found that the more experienced a firm was in terms of Internet presence, the greater the number of Internet uses it reported. For the tourism sample, years on the Internet showed a positive relationship with the level of external pressure and the

number of Internet uses. Thus, tourism firms experienced more pressure from the external environment and had a greater number of Internet uses if they had established an Internet presence prior to 2000. While the reason for higher external pressure was uncertain, the finding regarding the greater number of Internet uses was consistent with the studies by Dholakia and Kshetri (2004) and Locke (2004), who found that the amount of experience the firm had of the technology adopted was an important determinant in the adoption decision.

Overall, several conclusions can be drawn from the findings of this study. Firstly, both the retail and tourism SMEs reported similar results regarding the influence of the level of Internet support, international business, and family business on Internet adoption decisions. Secondly, business size and years on the Internet had more influence on the adoption decision for tourism SMEs than they had for retail SMEs. On the other hand, business type or legal structure was more influential on the adoption decision in retail SMEs than it was in tourism SMEs. Thirdly, among the three main categories of adoption factors, perceived benefits provided a stronger impact on the adoption decision than organisational readiness and external pressure, in both industries. This finding was consistent with prior studies that pointed to the relative advantage of the technology as the key factor influencing SMEs' decisions to adopt innovation (Chau & Hui, 2001; Thong,

1999). Fourthly, the tourism SMEs reported a higher level of perceived benefits, external pressure, and the number of Internet uses, compared to the retail SMEs. External pressure was also more important to the adoption decision for the tourism firms than it was for the retail firms. This finding was supported by previous studies, such as those of Lertwongsatien and Wongpinunwatana (2003), Lertwongsatien et al. (2004), and Scupola (2003). One explanation of this phenomenon is that tourism businesses are more likely to deal with international customers than are retail businesses. The Internet is particularly vital for tourism firms in their relationship with tourism operators and visitors. For example, one of the comments regarding Internet adoption from a tourism firm indicated that many customers now booked their entire New Zealand visit, including flight, bus, rail, cycling and more, via the Internet. In comparison, retail firms were more concerned with the organisational and technological resources needed to support an Internet adoption decision. For example, many retail businesses had commented on issues such as that the Internet was an expensive option for conducting business because of the high cost of quality connection and maintenance. In addition the problems of Internet security were identified.

5.2 Limitations

It is important to recognise a number of limitations of the research process that may have affected the results of this study. Firstly, the focus of the research has been on the relationships among constructs identified in this study. The factors and variables included in this study are not meant to be comprehensive. They were selected to represent the major factors potentially affecting the Internet adoption decision within organisations. Thus, the results should be considered with caution, as other potentially important factors may have been excluded. Secondly, only one person from each firm was invited to complete the survey. The results would have been more rigorous if different viewpoints had been used to measure the research constructs. Thirdly, the sample size of the tourism firms was double that of the retail firms. The findings could have been more accurate for comparison purposes if the sample size for both industries had been closer. Last but not least, the response rate of the retail and tourism firms in this study was 26.4 and 33.4 percent respectively. While these response rates were quite good for a mail survey, there may still have been some bias in who responded to the survey, so the results may not still represent the whole population of tourism and retail SMEs in New Zealand.

5.3 Implications and Future Research Directions

This study highlighted the importance of perceived benefits in influencing the decision of Internet adoption for SMEs in New Zealand. Although New Zealand is renowned for its strategic advantages in Internet-commerce, the uptake of Internet technologies is still lagging behind other countries, such as the United States, Europe, and Australia (Hossain, 2000; Yao, 2004). Some of the qualitative findings from this study suggested that the cost of high speed Internet connection is still prohibitive to many organisations, and thereby outweighs the benefits, especially to very small businesses. Over 96 percent of the businesses in New Zealand are SMEs, and most tourism firms are owner operators with limited IT capability. Many respondents commented on the need to open up the broadband market to lower the cost of Internet connection and thereby encourage firms to comprehend and appreciate its benefits.

This study sought to examine the factors of Internet adoption among small and medium enterprises. However, only two industries were under examination. Future research could be carried out in other industry sectors in New Zealand. Comparisons could also be made with more than two industries, and further research could be undertaken on Internet adoption behaviour in other countries, in order to further our understanding of a business organisation's adoption of Internet technologies.

APPENDIX A

9th October 2005

AAA Company
000 Colombo St, Christchurch

Attention: The Owner-Manager or Chief Executive Officer

Dear Manager / CEO

Re: Survey on Internet adoption

I am conducting a study on Internet adoption in small and medium-sized enterprises (SMEs) in New Zealand. Your participation in this survey would be greatly appreciated.

The purpose of this study is to identify firm and industry-specific factors that influence the decision to adopt Internet technologies. The findings of the study will provide a better understanding of Internet adoption from an industry-specific perspective. This understanding will in turn benefit you and others in the SME sector.

Please complete the following questions. If you wish to comment on any questions or qualify your answers, please use the space provided on the last page. The data you provide is anonymous, will be kept confidential, and will not be disclosed to anyone.

If you have any questions regarding this survey don't hesitate to contact me. It would be helpful if the survey could be returned by **October 26, 2005** in the enclosed rely-paid envelope.

I thank you in advance for completing the enclosed survey. Your contribution to this research is appreciated.

Yours sincerely,

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APPENDIX B

Small Business Internet Use Survey

For each of the following statements, please circle the number which best describes your opinion. (Please rate your agreement or disagreement by circling the appropriate number using the following scale.)

1 = Strongly disagree; 2 = Tend to disagree; 3 = Undecided; 4 = Tend to agree; and 5 = Strongly agree

1. The Internet is an efficient way of communicating with customers.
   Strongly Disagree 1 2 3 4 5 Strongly Agree
2. The size of the company has a major impact on the decision to adopt the Internet.
   Strongly Disagree 1 2 3 4 5 Strongly Agree
3. An organization can actually experience competitive advantage through Internet technologies.
   Strongly Disagree 1 2 3 4 5 Strongly Agree
4. The amount of financial resources of the company has a major impact on the decision to adopt the Internet.
   Strongly Disagree 1 2 3 4 5 Strongly Agree
5. The Internet improves the organizational relationship with customers and/or suppliers.
   Strongly Disagree 1 2 3 4 5 Strongly Agree
6. Competitive intensity within the industry has a major impact on the decision to adopt the Internet.
   Strongly Disagree 1 2 3 4 5 Strongly Agree
7. Pressure from suppliers has a major impact on the decision to adopt the Internet.
   Strongly Disagree 1 2 3 4 5 Strongly Agree
8. The Internet is an efficient way of communicating with suppliers.
   Strongly Disagree 1 2 3 4 5 Strongly Agree
9. The level of Information Technology knowledge among non-IT professionals, in particular, the owners or other innovation champions, has a major impact on the decision to adopt the Internet.
   Strongly Disagree 1 2 3 4 5 Strongly Agree
10. The Internet is an economic way of answering customer queries.
    Strongly Disagree 1 2 3 4 5 Strongly Agree
11. Pressure from potential employees has a major impact on the decision to adopt the Internet.
    Strongly Disagree 1 2 3 4 5 Strongly Agree

12. The Internet is an economic way of delivering product information.

Strongly Disagree 1 2 3 4 5 Strongly Agree

13. The level of Information Technology knowledge among IT professionals in the company has a major impact on the decision to adopt the Internet.

Strongly Disagree 1 2 3 4 5 Strongly Agree

14. The Internet is an effective way to gather market- and competitor-related information.

Strongly Disagree 1 2 3 4 5 Strongly Agree

15. The Internet improves business performance in terms of sales revenue and/or profits.

Strongly Disagree 1 2 3 4 5 Strongly Agree

16. Pressure from customers has a major impact on the decision to adopt the Internet.

Strongly Disagree 1 2 3 4 5 Strongly Agree

17. The Internet is a useful business tool to build brand image and promote the company's image.

Strongly Disagree 1 2 3 4 5 Strongly Agree

18. The extent of Information Technology use within the company (e.g. whether there are adequate computer systems to access and use the Internet without major problems) has a major impact on the decision to adopt the Internet.

Strongly Disagree 1 2 3 4 5 Strongly Agree

19. The Internet is an efficient way of communicating with employees.

Strongly Disagree 1 2 3 4 5 Strongly Agree

20. Which statement best describes the level of Internet support your business offers? (Please tick one box only.)

Have NO Internet connection…… ☐
Have Internet connection but NO business Website…… ☐
Business has a basic Web Page but NO permanent Internet connection…. ☐
Business has a basic Web Page and a permanent Internet connection…… ☐
Business has a Web Page with an online catalogue…… ☐
All business transactions and payments can be done through the Website. ☐

21. Please indicate your full time equivalent employee numbers for the current year, 2005 (Please tick one box):

0-20 ☐ → Are all employees of the business from one family? Yes ☐
21-99 ☐ No ☐
100-200 ☐

22. Please indicate how the Internet is used by your organization. (Tick all that apply.)

- ☐ External communication (E-mail)
- ☐ Randomly looking for information
- ☐ Searching for Web page addresses
- ☐ Obtaining information from suppliers
- ☐ Offering information to consumers (on Website)
- ☐ Contact with governmental agencies
- ☐ Internal communication (Intranet)
- ☐ Sending purchase orders to suppliers
- ☐ Product and market research (on Website)
- ☐ Receiving orders from customers
- ☐ Offering online payment options
- ☐ Voice/video conferencing
- ☐ Placing job vacancies

23. Please tick the appropriate box that best describe the type of business of your organization: (Tick one only)

Sole proprietor……☐
Partnership……☐
Small corporation....☐
Limited……☐
Other……☐

24. Please indicate the year (e.g. 1999) that your organization first started to use the Internet.

_____

25. Is the business an international business (either you have international customers or you are trading in overseas countries)?

Yes ☐ → Please indicate the number of year(s) of international experience:
No…☐ _____
In the near future ☐

26. If you have any comments you would like to make about Internet adoption among Small- and Medium-sized Enterprises, please write them on the following space.

Your contribution to this research is greatly appreciated. Please return your questionnaire in the reply paid envelope provided.

THANK YOU!

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